

# Railway Age

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## Still Serviceable, But Obsolete

**A**T this season of the year when the officers of many roads are making up their budgets of recommended expenditures for next year, the needs for work equipment come up for consideration with other demands. In general, this involves consideration primarily of the amount of *additional* equipment required, together with that needed to replace equipment that is worn out and no longer fit for service. There is still another consideration, however, that should not be but is often overlooked, namely, the economy of replacing equipment that is still in serviceable condition by equipment that is of more modern design and more economical to operate. The last fifteen or twenty years have been characterized by a marked development in a wide variety of equipment applicable to railway work. This has consisted in part of the introduction of new devices to perform work previously done by hand. It has also been characterized by the rapid improvement of many types of equipment that have long been standard. Many of these improvements have served either to increase the amount of work done or to reduce still further the amount of labor required for its performance, either of which reduces the cost of performing the task. In many instances the savings effected by the more modern types of equipment as compared with earlier designs is sufficient to yield large returns on the investment in the new equipment so that the roads are justified in discarding the earlier types, even though they are still serviceable, and substituting therefor the more modern designs. Yet, in general, the shortage of capital has been such that the roads have spent the money available for new equipment and continued to use the old equipment as well. In this respect the railways are trailing many other industries which have not hesitated to substitute new equipment for old whenever the advantages of the new justify its purchase. Prior to making up their budgets for the new year, railway officers can afford to look over the work equipment that they now have in service to determine whether they can afford to use it longer, in view of the more modern equipment that is available.

## A Permanently Closed Hunting Season for Insulators

**R**AILROAD employees, by properly directed efforts, can do a great deal to reduce the malicious breaking of line wire insulators on communication, signal and power supply system pole lines along the right of way. The ordinary glass or porcelain insulator does not deteriorate with age but it can readily be broken by bullets or rocks. When any considerable number of insulators are broken on a communication circuit the wire is partially grounded, resulting in unreliable operation and introducing an element of uncertainty and error that is nerve racking to operators. The St. Louis South-

western has 1,511 miles of pole line with 30 or 35 poles to the mile, the total wire mileage being 8,180. In 1923 this road used over 16,588 insulators for telegraph maintenance which, together with the labor of renewing them on the pole line, represented a total expenditure of \$6,137. What then can be done to reduce this expense and interference with communication? The answer is to educate, not only the boys who throw rocks, but also the men who shoot insulators, regarding the serious results of their mischief. The St. Louis Southwestern has accomplished excellent results by enlisting the co-operation of local station agents, section foremen, trainmen and other employees. In many towns the station agent has been permitted to give a short talk to each class in the school, explaining the damage done to communication circuits by the malicious breakage of insulators. An appeal to the public service feature of telegraph service seemed to be most effective. This was especially brought out by the following statement: "You people in the smaller cities and towns along the railroad are no less concerned in good telegraph service than those in the larger cities for you depend daily on communication to receive reports on the wheat, corn and cotton markets as well as vital messages in times of sorrow or distress or for tidings of joy and happiness." The local newspapers have co-operated in getting this message to the public. Trackmen and trainmen keep a constant watch for persons breaking insulators and every means is taken to punish offenders, such cases being given wide publicity. In the first year of this campaign the expense for replacements of insulators was cut 31 per cent and in the second year 43 per cent.

## Collisions with Track Cars

**T**HE Bureau of Safety of the Interstate Commerce Commission has this month included in its accident records detailed reports on two collisions of trains with "track cars"—gasoline motor cars light enough to be lifted readily from the track, and moving on the main track without specific time-table or train-order authority. The two reports are abstracted on another page. As track-car movements are not usually recognized either by the railroads or by the government as train movements, it would seem to be preferable to call these cases miscellaneous train accidents or train-service accidents, not collisions. However, the classification is not important. It is quite important, however, to have cases of this kind investigated, for there are indications that practice is not well systematized. In the first case, that at Rock, W. Va., the track car had substantially the status of a train, and the dispatcher and operators no doubt intended to safeguard it as thoroughly as they would do for a train; but they were free from the restraint of the usual regulations for moving trains, and under such conditions a mistake could easily creep in. The government's usual observation that the block system would have prevented the collision would be eminently

appropriate in this case, but it does not appear in the report. Hand cars have from time immemorial been moved on main tracks wholly without technical train rights, and with a tolerable degree of safety. At any rate there has been no concerted complaint. The practice does involve an element of danger to trains, but not a great danger to the workmen for they usually can jump off on the approach of a train, and save themselves. It is, however, a fair question whether the four-wheel motor car, even if theoretically light enough to be quickly taken off the rails, should be treated with the extreme informality that is common with hand cars. The block system should be managed under a code of rules making it adaptable to every possible condition; that is, so as to be utilized to safeguard any kind of vehicle or machine which is in position to dispute the right of track with a locomotive. It was needed recently at Portland, Tenn., where two track cars collided with each other with disastrous results. (See *Railway Age*, November 27, page 1057.) Readers interested in the electric train-staff system may recall that on a certain Western road, some years ago, where the system was in force on single track through a tunnel, the chief engineer, when he had occasion to walk through the tunnel on foot, took the train-staff in his pocket. The space interval principle yields to none in combined simplicity and safety.

## Increasing Safety on the Railways

THERE is no form of open and strenuous rivalry in which the railways and their employees can engage with more beneficent results than rivalry in making safety records. The reduction of accidents which has been accomplished during the last fifteen years has been one of the most notable achievements on the railways. The number of persons of all classes killed in train and train service accidents in 1913 was 10,550, and in 1925 it was 6,354, a reduction of more than 40 per cent. The number injured in 1913 was 86,688, and in 1925, 47,993, a reduction of over 50 per cent. These reductions were made in spite of the large increase that occurred meantime in the amount of transportation service rendered; and, in fact, in proportion to the amount of service rendered the accident record of 1925 was the best in history.

The record made in 1926 may be still better than that of 1925. The accident statistics of the Interstate Commerce Commission are available as yet for only seven months of the year. In this period total fatalities per million locomotive miles were 3.49, as compared with 3.57 in 1925. There was a small increase in fatalities to employees, but a larger reduction in fatalities to passengers. The reduction within ten years, and especially within fifteen years, in accidents to employees and passengers, for whose safety the railways have a special responsibility, has been especially notable. The only class of accidents that has steadily increased has been those at highway crossings, and even they have declined relatively, the number of persons killed in proportion to the number of automobiles registered in the country being only one-third as great in 1925 as in 1917.

The facts show, however, that a tremendous amount of work must be done by the railways and their employees to make further satisfactory progress in increasing safety. To stimulate a spirit of rivalry in this work, which from the standpoint of both humanity and economics is so important, Mrs. E. H. Harriman began in

1913, through the American Museum of Safety, to award medals to those railways which make the best annual safety records. The gold medal has been won by different railways, including the Southern Pacific, New York Central, Cincinnati, New Orleans & Texas Pacific and Alabama Great Southern. The Union Pacific System won it for the record made in 1924; and this system has now been awarded it for the second time because of its record in 1925. The committee making the award has this year divided the railways into three classes according to the amount of their locomotive mileage. The silver medal, for roads having between ten and one million locomotive miles annually, has been awarded to the Duluth, Missabe & Northern, and the bronze medal, for roads having less than one million locomotive miles, has been awarded to the Green Bay & Western. Each of the three roads mentioned was found to lead in safety of operation in 1925 in the class to which it was assigned, after detailed study had been made of the service, the operating conditions and the accident records of all the railroads of the country. They may well regard the winning of these medals as a high achievement.

While there has been a gratifying reduction of railway accidents as a whole within the last decade or more, careful scrutiny and comparison of the statistics given in the accident reports of the Interstate Commerce Commission disclose that there are wide differences in safety on the various railways, and that there is no close relationship between their physical condition, their operating conditions, and their safety of operation. The available information forcibly suggests that safety depends mainly on the methods adopted and constantly used by the managements to stimulate officers and employees to be on the alert to avoid and prevent accidents. The promotion of safety is essentially a function and problem of management. The success with which it is promoted on each individual railway seems likely to be pretty closely in proportion to the attention that executive and operating officers of all ranks give to it and the enthusiasm for safety that they arouse among employees.

Because of the wide publicity given to collisions and derailments resulting in any considerable number of deaths, and the amount of regulation adopted to prevent accidents of these kinds, there is a popular belief that most fatalities on railways are due to them. The Interstate Commerce Commission, in its excellent accident bulletin for the year 1925, gives an analysis of the causes of train and train service accidents which shows how erroneous this popular belief is. Only 3.55 per cent of the fatalities to all classes of persons that occurred in 1925 were due to derailments and only 1.95 per cent to collisions, a total of 5.4 per cent. Thirty-eight per cent were due to persons being struck or run over at places other than highway grade crossings; almost 34 per cent occurred at highway grade crossings; 7 per cent occurred to persons who were getting on or off cars or locomotives; 3.9 per cent were due to persons falling from cars and locomotives, and the remaining 7 per cent to a variety of causes.

Of all the employees killed in train and train service accidents, one-third met their deaths by being struck or run over at places other than highway grade crossings; about 10 per cent in derailments; less than 7 per cent in collisions; 5.29 per cent in getting on or off cars or locomotives; 8.63 per cent in falling from cars or locomotives; 3 per cent through coming in contact with fixed structures; 3 per cent as a result of hand cars being struck by cars or locomotives; 5.21 per cent in coupling or uncoupling, and so on. The causes of accidents are so numerous and varied that the only means by which the total number of them can be sub-



stantially reduced is by creating a morale which will cause the entire personnel of a railroad to make the greatest efforts and exercise the utmost vigilance to avoid them.

The Safety Section of the American Railway Association, at its meeting in April, 1925, adopted a program of trying to reduce accidents 35 per cent by the end of 1930. There is no goal for the attainment of which the railways should strive harder individually and in co-operation than this one. Some progress has been made toward its attainment, but progress in future must be much more rapid if it is to be attained. The goal would easily be reached if all railways would make their safety records as good as those that are now the best. The energy and zeal devoted to reducing accidents, the stress put upon safety as an evidence of efficiency of operation, is plainly greater on some roads than on others. Every railway management ought to get squarely behind the movement to reduce accidents 35 per cent and give it strenuous and unstinted support. That would be a record of increased efficiency of operation that would be most creditable; and, in addition to the lives and suffering it would save, it would be worth a great deal of money. If all the direct and indirect expenses caused by accidents could be footed up they would be found to amount to a formidable total.

## New Classifications Offered for Discussion

THE work of revising the Interstate Commerce Commission's accounting classifications for steam roads, which has been under way for some four or five years, seems finally about to be productive of results. At least, enough progress has been made so that the Railway Accounting Officers Association, on Saturday last, sent to its members and the chairman of the Interstate Commerce Commission sent to those who might be able and willing to offer helpful criticism, a tentative draft of all the classifications. Surprising as it may prove to those who know something about how far apart the commission's representatives and those of the accounting officers association appeared to be last June, the two groups now seem to be working in fairly close harmony, although they have not yet arrived at entire agreement. The original intention of the commission was to make the new classifications effective as of January 1, 1927. This ambition has, however, been abandoned but it is hoped to be able to complete the work in time for making the new classifications effective on January 1, 1928.

The important question is wherein the tentative revision now offered for discussion differs from the present classifications. The difference is entirely in matters of form and not in principle. There are no essential changes in the general methods of railway accounting. What has been done chiefly has been merely to revise the texts of the accounts for the purpose of bringing them up to date and to change them otherwise in the light of the experience that has been had with them in the 12½ years since they went into effect on July 1, 1914. There will be noted a decided reduction in the number of primary accounts. Thus the classification of investment in road and equipment shows a reduction from 62 present primary accounts to a proposed 42. The accounting officers suggest that the primary accounts in this classification be eliminated altogether.

In the classification of operating expenses, the present eight general accounts remain unchanged, but there is a

proposed reduction in the number of primary accounts from 209 to a proposed 125. The reduction is entirely in the maintenance of way and maintenance of equipment items and is effected chiefly by the consolidation of all the present separate depreciation and retirement accounts into one each of these accounts in each of the two groups. However, the commission is about to issue an order in its proceeding relative to depreciation charges and there may be further developments with respect to this feature as it applies to the classifications. There is no essential change in the primary accounts in the transportation group. The accounting officers, however, suggest that a substantial reduction could be made in these accounts. What is more important they recommend the establishment of a new general account named "Miscellaneous" in which would be included the retirements and depreciation items, valuation expenses, all the insurance items, pensions and relief, casualties (injuries to persons, loss and damage, etc.) and finally in place of the present clearing account a new primary account of material store expenses. The accounting officers also recommend the setting up of new primary accounts for work train expenses and shop expenses to be shown under maintenance of way and maintenance of equipment respectively. The commission, however, has thus far refused to go along with the accounting officers on these suggestions.

Besides the suggestions referred to, the accounting officers have several others that the Bureau of Accounts has also thus far declined to adopt. In general, it will be noted that their purpose is to protect net railway operating income which, of course, is commendable.

In general, what is to be said concerning the new classifications as a whole? First the Bureau of Accounts and the Railway Accounting Officers Association have been working on the revision of the classifications for some four or five years and now seem closer to agreement than they have ever been before. One may presume, therefore, that the new classifications represent the best thought of both the regulatory body and of the railway accounting profession. It is only too apparent that both parties are convinced that the classifications should be revised, although it will be a question as to how generally this view is held by those in other departments of railway activity. There is every reason to believe therefore that the revision will be adopted without substantial change from its present form.

Nevertheless, there is much room for keen disappointment. The revisions, it must be confessed, add nothing to railway accounting science. This may be for the best on the ground that radical change would disturb comparability which, of course, is a most important factor in an industry's accounting methods. Nor is the failure to add anything to railway accounting principle particularly surprising. As a matter of fact little has been done in this respect for many years. Any one who has watched closely the activity of the influential Railway Accounting Officers Association for an extended period of time will have observed that the accounting officers' accomplishments—while otherwise of most commendable quantity and quality alike—have related entirely to matters of the procedure or routine methods of railway accounting and have almost entirely neglected the principles or science of railway accounting. For the new classifications to be other than what they are, they would have to blaze a new trail, which might or might not be advisable.

The significance of this is evident when one considers the subject of cost accounting which has been much talked about but concerning which the railway accounting officers have consistently refused to put them-

selves on record. One question, for instance, that has been at issue for years is the amount of repair or manufacturing activity that the railways should conduct in their own shops. The complaint is always made in the discussion of this question that the railways seldom know their real costs—particularly their overhead. As was said in a paper recently published in these columns: "Perhaps one of the reasons why so little attention is paid to these overhead items is that the system of accounting prescribed for the railways places great difficulty in the way of setting up accurate costs for these incidental activities. However effective this system may be in relation to the primary business of transportation, it is badly in need of some supplementary classification. Before clear thinking and correct business policies can be fully developed with respect to these secondary competitive operations, some method must be developed for bringing together from widely scattered maintenance and property accounts the items necessary for cost finding."

Many others also have raised the question of the desirability of cost finding or cost accounting. There is a belief in some quarters that the railway accountants are behind those of other industries in this feature of their work. It may or may not be possible—or if possible, worth the expense—to have cost accounting in the railway industry. Even if such cost accounting were to prove necessary or desirable it might or might not be advisable to include it as a part of the classifications of railway accounts. But whatever is true the questions indicated will be asked during the approaching discussion of the revised classifications.

## A Subject for Joint Study

THE railroads desire to get the kind of equipment, materials and supplies they need at the lowest practicable cost. They desire to have rebuilding, reclamation and repairs so made as to get the greatest practicable results for each dollar they spend for these purposes. They desire at the same time to stabilize the employment of their various classes of labor as much as is compatible with maximum efficiency in capital expenditures, operation and maintenance.

In the pursuit of these objectives there has been a tendency within recent years for them to increase the amount of manufacturing done for their own account. Concerns devoted to the manufacture and repair of equipment and supplies have expressed both concern and criticism regarding this tendency. They have expressed concern about it mainly because it tends to reduce the amount of business given to them. They have expressed criticism of it upon the ground that it does not reduce, but increases, railway capital and operating costs, it being contended that concerns that specialize in manufacturing can manufacture for the railways cheaper than the railways can manufacture for themselves. The argument from the standpoint of the manufacturers recently has been forcibly presented by the American Railway Car Institute to the railways through a letter addressed to R. H. Aishton, president of the American Railway Association, which was published in the *Railway Age* last week.

In order that the question raised may be considered to any purpose it must be frankly recognized that it must be considered almost entirely from the standpoint of what policy will, in the long run, be most conducive to railway efficiency and economy. The legal right of the railways to earn a fair return is dependent upon their

ability to satisfy the Interstate Commerce Commission and the courts that they are efficiently, economically and honestly managed. If it is most conducive to such management for them to buy equipment and materials from, and have them repaired by, manufacturing companies, it is their duty to do so. If it is more conducive to such management for them to manufacture for themselves, it is their duty to do this.

But how do the costs incurred by the railways in patronizing outside concerns, on the one hand, and doing manufacturing for themselves, on the other hand, actually compare? The Railway Car Institute says in its letter: "The cost to the railroads of manufacturing and rebuilding their own equipment in their own shops is normally higher than in well organized and responsible contract shops. In a number of cases in which direct comparisons have been made this fact has been clearly established and in no case has the reverse been established." These assertions are very definite. It is understood that the reference to "a number of cases in which direct comparisons have been made" relate to comparative studies of costs in railway and outside shops the results of which have not been made public. Perhaps the studies made were not considered broad enough in their scope, or their results sufficiently conclusive, to justify giving publicity to them. The statements quoted, however, raise very directly the important question of what are the actual costs of manufacturing and rebuilding in railway shops and outside shops. This is a question that ought to be answered. It can be answered satisfactorily only by having a broad survey made by competent and impartial experts. Such a survey could be made only by a joint arrangement on behalf of the railways and the manufacturers.

There are other matters to be considered besides comparative manufacturing costs. Many railways have difficulty in raising enough capital to make needed enlargements and improvements in their exclusively transportation facilities. Will it not be more to their interest and that of the public for them to devote all their capital resources to purely transportation purposes than to use part of them in manufacturing? At the same time, it is expedient for the railways, their employees and the public that they should adopt all reasonable measures for stabilizing their employment of labor, because stabilized employment will improve the morale of their employees and enable them to conduct their purely transportation business more efficiently and economically.

While, however, comparative manufacturing costs are not the only thing to be considered, they are clearly of primary importance. They are too important to be guessed at or arrived at by inadequate accounting methods. Furthermore, the desirability of stabilization of employment by manufacturers of equipment and supplies is a factor which should not be disregarded. The railways, at least for many years in the future, must buy equipment and materials largely from outside manufacturers. Great fluctuations in railway purchases from manufacturers cause large fluctuations in employment by the latter, and thus increase their costs and the prices the railways must pay them.

It has been the policy of some railways, notably those of Great Britain, to have a large part of the manufacturing done for them in their own shops. It has been the general policy of the railways of the United States to do relatively little manufacturing for themselves; and the development of the railway equipment and supply manufacturing industry of this country has been the result. Whether, and if so to what extent, this past policy of our railroads should be changed is a question of great importance to them, and of even greater im-



portance to the manufacturing industry. In raising it as they have the manufacturers are prompted mainly by self-interest, but it cannot be doubted that it is to the interest of the railways as well to have it so studied that it can be settled in accordance with indisputable facts and sound economic principles.

## Modern Tools Get Results

THE installation of modern machine tools in a railroad shop is one method of increasing production, decreasing the number of men employed and reducing the cost of unit production. That these results can be obtained through the medium of modern machine tools and shop equipment has been proved to the satisfaction of the management of at least one railroad.

This railroad was faced with the problem of increasing its monthly output of classified locomotive repairs. Matters were further complicated by the recent acquisition of a large number of modern, heavy locomotives. The alternatives were either to enlarge the existing shop facilities or modernize the machine tool equipment. The latter course was chosen. It was finally decided to retire at the main locomotive repair shops all machine tools which had been in service ten years or more. On this basis it was found necessary to remove over 50 per cent of the existing machinery. Thus far, over half of this program has been carried out and the remainder is provided for in the 1927 budget.

What results have been obtained? More locomotives are receiving classified repairs each month; there has been a decrease in the unit cost of locomotive parts, and there has been an increase in the quality of the output. Modernizing the flue shop, including the installation of an electric flue welder, has effected a reduction of some 40 per cent in the number of men required in this department and the labor turnover has been eliminated. Similarly, in the boiler shop, complete modernization of the equipment, including the installation of a modern power flanger to replace hand flanging methods, has made possible a reduction of a little more than 47 per cent in the number of men employed; the quality of work is improved, and this department can now keep up with the requirements of the rest of the shop.

Such results require no comment.

## New Books

*Trains, Tracks and Travel.* By T. W. Van Metre. 236 pages, 6¾ in. by 9¾ in. 205 illustrations. Bound in cloth. Published by Simmons-Boardman Publishing Company, 30 Church Street, New York. Price \$3.50.

Setting forth in a simple manner just what goes into the makeup of a train—cars, engine and tender—the roadbed and track over which it travels, the organization and use of terminals and methods of operation, "Trains, Tracks and Travel" is a book intended to appeal to "boys from eight to eighty" who may be interested in approaching the subject of railroad transportation without having brought to it any extensive technical knowledge.

Primarily, Professor Van Metre in writing the book has attempted to reach all those youngsters who are somewhere near that stage in their lives when their greatest ambition is to become locomotive engineers. The language of "Trains, Tracks and Travel" is never beyond the understanding of an intelligent layman and, in spite of the handicap thus laid on an author in treating

a field ordinarily discussed only through use of a wealth of technical complexity, Professor Van Metre has succeeded in making clear signal systems, operation of terminals, care of equipment and plenty of other matters ordinarily not easy to explain.

An example of Professor Van Metre's method of handling the subject is to be found in his chapter on railroad track. He begins by giving the history of tracks from its days of varied gages, tells how rails were laid, describes the process of their manufacture, sets forth the reason for their shape, their joints, their switches and their weights. He next treats of the right-of-way and explains how rails are laid on grades, through tunnels, and over bridges. He describes the care that is taken of the roadway, the inspection of tracks, the tools, and means that are used in laying tracks and keeping them in repair, and points out briefly the dangers that arise when the steel highway is not at its highest point of efficiency.

Somewhat in the same manner the author handles in separate chapters the locomotive, freight car, passenger car, freight terminal, passenger station and terminal, and train operation. Of each he describes briefly the development, the necessity, the various forms and uses. In all he has done, he has been greatly aided by the illustrations used in the book. These are many, carefully selected and arranged. In fact, they form the outstanding attraction of the work to the person who first gives it only a casual glance, and they play a dual part in the book's achievement. They challenge and compel attention, and, once it is gained, they are so organized that an orderly, progressive examination of them will give the reader a history and explanation by example of all those subjects treated by Professor Van Metre.

"Trains, Tracks and Travel," it is apparent, is the ideal gift for a youngster interested in "trains," that generic term the boy employs in reference to all activity over rails. It makes a gift that is instructive, authoritative, and easy to understand. And, more than is commonly meant by a "gift book," it is precisely the work that should be on reference shelves in all libraries for use by all young students when they desire or are told to read something about railroads.

L. G.

## Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

### Books and Pamphlets

*Fourteenth Annual Report of the Secretary of Commerce for the Fiscal Year Ended June 30, 1926.* "Elimination of waste in railway transportation," p. 5-7. Economic review of transportation, p. 47-49. The reports of the Bureau of Foreign and Domestic Commerce, p. 94-150, Bureau of Standards, p. 151-195, and Bureau of Mines, p. 250-295 may also be of interest. 297 p. Pub. by Govt. Print. Off., Washington, D. C., 20 cents.

*Tentative Classifications of the Interstate Commerce Commission and Proposed Revisions, with Recommendations of the Railway Accounting Officers Association.* R. A. O. A. Bulletin No. 112. 114 p. Pub. by Railway Accounting Officers Association, Washington, D. C. Apply.

### Periodical Articles

*William Z. Ripley Gives His Remedies for Eradicating Big Business Evils.* Prof. Ripley comments on the comments that have been made about his various articles on corporation reports, non-voting stock and so on, and suggests definite measures that could be undertaken to prevent the things he has criticised. *World's Work*, December, 1926, p. 128-138.

## Letters to the Editor

[The RAILWAY AGE welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about 250 words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.]

### Liquor and Salesmanship

CHICAGO, Ill.

TO THE EDITOR:

I call your attention to an editorial published in the Chicago Tribune on November 9, entitled, "Liquor and the Railroads," in which are incorporated sentiments which correspond with my own personal feelings on this subject. They also correspond with the ideas of our company. As sales manager of a railway supply company I have regretted to observe that the use of liquor as a sales influence is growing among certain of our competitors. I know of many cases where salesmen have come to conventions armed with several trunkloads of liquid refreshments which were brought for the occasion. This evil is not limited solely to conventions but is going on continuously, having developed in some instances to the point where the supply agent is simply a delivery boy.

Second only to the club of traffic, we find the competition of liquor distribution the most serious with which we have to contend. Our company has always refused to use either of these arguments but it is hard to stand by and see a competitor with an inferior product put his article across with either of these means. Issuing, as you do, the foremost publications in this country, I urge you to use your columns in fighting these two evils.

SALES MANAGER.

### Headlights and Train Control

TO THE EDITOR:

Your editorial on "Headlights and Train Control" appearing on page 919 of the November 13, 1926, issue of the *Railway Age* raises a very interesting question as to the distribution of expense as between headlight maintenance and operation and that chargeable to train control. This is a matter which may well be determined by some railroad association.

However, one statement made as fact in your editorial is, I believe, open to question. You say "In all cases it has been necessary to raise the standard of headlight maintenance to insure protection to the train control equipment." This is granted. Continuing, the editorial states, "This condition does two things; it causes headlight costs to mount and it raises the question of which costs to apply to the headlight and which to the train control apparatus."

Until more data are obtained, can we say that train control "causes headlight costs to mount"? More data may show that train control has caused headlight costs to decrease. Is it not a fact that before the advent of train control, headlight maintenance was not as good as now? All that was required formerly was that the lights were to be available when needed. This meant, as a rule, easy maintenance or "trouble shooting" which,

in the true sense of the word, is not maintenance as understood in signal department work. Formerly there may have been grounds on the lighting circuits and the turbo may have been giving a voltage of from 35 to 45 volts instead of the normal voltage of 32 volts. With grounds on the circuits, a certain fuel loss is directly chargeable to the energy generated but doing no practical work. This, no doubt, may be a small item.

The average life of a tungsten filament lamp is about 1,000 hours. For such lamps it is generally stated that for a 5 per cent increase in voltage over the normal rating, the life of the lamp is about halved. This brings up a very interesting question as to cab light and headlight replacements. Why not compare these replacement items for a period of 12 months before train control was installed and for a like period after train control has been in service.

Train control will be found to bring a credit to the railroads not only in the matter of longer life of cab lights and headlights (which latter, by the way, are very expensive) but also in the way of better service.

Under the law, a locomotive may not be run at night without lights and while it is permissible to operate an engine without a headlight, provided a lantern is displayed, in many cases when the headlight fails on the road, the engine is tied up. This introduces a serious element of delay and loss. It would be interesting to make a comparison between the number of headlight failures on the road for a certain period prior to the installation of train control and for the same time after it has been in service.

Every new development in railroading has at first always been considered to increase the costs of maintenance and operation but generally time has proved that such developments, instead of increasing costs, have resulted in economies not otherwise thought of. As an example, when electric traction lines first began to install automatic signals, the statement was made that maintenance costs would be increased because the rail bonding had to be kept up to a 100 per cent standard. It was found, however, that the saving in power through having properly bonded rail joints more than offset any increased maintenance costs. No doubt better headlight maintenance will also show economies.

SIGNAL ENGINEER.



Chicago Union Station Yards—Burlington "Colorado Limited" at Right





*The New Perishable Products Terminal Covers an Area of Approximately 23 Acres*

## B. & O. and Reading Open Joint Produce Terminal

*New facility at Philadelphia for the sale, refrigeration and delivery of perishable products is among largest in the country*

WITH the formal opening of the new Philadelphia perishable products terminal at Philadelphia On November 1, the Baltimore & Ohio and the Reading, joint owners, now have one of the largest and most complete strictly perishable freight terminals in the United States. Pressed by the growth of this class of business in the Philadelphia area and the limitation of their former facilities, these roads joined in the construction of the new terminal, work on which was started late in May of this year. Speeding construction so as to have the new facilities in service for the fall movement of fruit, two of the main units of the new terminal are now completed and in service, while the third unit is rapidly nearing completion and is expected to be in service by the middle of next February. The three units referred to include a large auction sales building, a large private sales building and cold storage warehouse, and an extensive team delivery yard, which together will represent an investment of about \$4,000,000 and provide ample trackage, building space and all of the equipment necessary for the expeditious and orderly unloading, sale, refrigeration, storage and delivery of the perishable products handled by these two roads in the city of Philadelphia.

The new produce terminal lies close to the water front of the Delaware river and extends from Delaware avenue on the east to Weccacoe avenue on the west, and from Jackson street on the north to Ritner street on the south, covering an area of approximately 23 acres. The principal advantages of this location are that it is practically in the center of the city's terminal area on the

most important water front avenue, and furthermore, that it is ideally situated for easy access by both the Baltimore & Ohio and the Reading. In this latter respect, the Baltimore & Ohio has direct access to the west end of the terminal from its own tracks in Vandalia street, while the Reading has direct access to the east end over the tracks of the Philadelphia Belt line which lie in Delaware avenue.

These two roads will concentrate the delivery of their perishable freight in Philadelphia at this new terminal, it being expected that the greater part of the fruit handled, coming from California and Florida as it does, will be brought over the Baltimore & Ohio, while the greater part of the vegetables will be handled by the Reading. In general, the auction sales building will be used throughout the year for the display and delivery of all perishable produce sold at auction, while the private sales building will be used for the handling of such perishable products as are not customarily sold at auction. The use of the team delivery yard will be confined for the most part to the direct carload delivery of the heavy traffic in California juice grapes during the fall months, and for the handling of truck garden products during the remaining months of the year.

### **Auction Sales Building an All-Year Facility**

The auction sales building at the new terminal is a one-story reinforced concrete structure, 1,000 ft. long by 90 ft. wide, except at the east or Delaware avenue end where for a length of 136 ft. the building is two stories high. Directly back of this two-story section is

the long one-story fruit display and delivery shed, which has sufficient floor space for the contents of 150 cars with ample aisle space to afford easy access to any portion of each carload lot independently for inspection and delivery. In order to accomplish this the building was constructed with a broad monitor-top roof which requires only two single rows of columns throughout the length of the building, on each side of the wide center bay, these columns supporting the reinforced concrete roof members and also the reinforced concrete slab roof deck.

The only other obstructions to the floor area are at a mid-point in its length where a fire wall is located across

means of chain hoist mechanisms. In order to afford protection for loading and unloading during bad weather, both sides of the building are equipped throughout their length with reinforced concrete canopies which are constructed integral with the roof structure. The covering of these canopies, as well as that of the main building, is of the built-up type.

### Two Large Auction Rooms

#### Facilitate Buying and Selling

Day lighting of the building has been amply provided for through the use of continuous double rows of steel sash, with frosted wire glass, along both sides



Adequate Trackage Serves All of the Facilities at the New Terminal

the entire width of the building, and where several small rooms have been laid out for use as lavatories and locker space for the building employees.

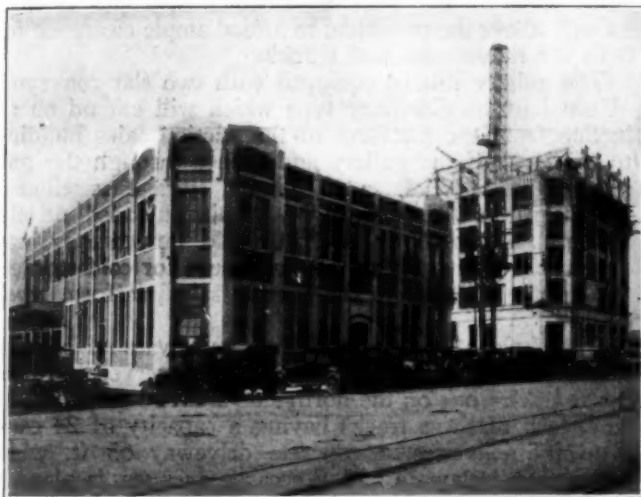
In order to facilitate the handling of the products received and delivered from this building, the floor is at car floor height, as is also a platform 8 ft. wide provided along the entire north side of the building, the flooring used throughout being Kreolite creosoted wood blocks. In order to avoid the necessity of spotting cars, both sides of the building are equipped with rolling steel doors, separated only by the width of the outside wall columns. These doors, of which there are 50 on each side, were furnished by the J. G. Wilson Corporation, New York, and are all individually hand-operated by

of the roof monitor and above the doors in both side walls. At night or on dark days, the building is electrically lighted throughout with provision also for the connection of extension circuits for use in lighting the interior of refrigerator cars. Heating of the building is by steam, supplemented by Skinner Brothers blower units which are suspended from the roof structure on each side at frequent intervals. Steam for this system is to be supplied from a central heating plant which will be located in the basement of the cold storage warehouse. The entire heating system is thermostatically controlled so that it will permit the handling of perishable products under all weather conditions. Ventilation of the building is afforded through a large number of



Robertson protected metal ventilators installed at intervals along each side of the roof monitor.

The two-story section of the auction sales building, which faces on Delaware avenue, is of the same type of construction as the long display and delivery room behind it, except that in order to enhance its appearance, it has been faced with an attractive hard burned red



Both the Auction Sales Building and the Cold Storage Warehouse Are Attractive in Appearance

brick. This portion of the building has been so arranged as to provide office space on the first floor for the agents representing the railroad companies, and office space and two large auction rooms on the second floor for the use of the auction company conducting the sales in this building. In addition to this division

ideal conditions as possible for carrying on the auctions, in which a number of different languages will be represented. In each case the floor is sloped toward the front of the room where a two-level elevated rostrum is provided for the use of the auctioneer and clerks. Each seat in the rooms is provided with a small steel frame, wood top desk, which will afford added convenience to the buyers. These rooms are well heated and ventilated, and special treatment has been given the walls and ceilings in order to make them acoustically correct. Adequate day lighting of these rooms, as well as the office space on each floor, is provided through large areas of steel sash.

In order to expedite the unloading of cars and the removal of the products held in the building for auction, both sides of the building are served by tracks and concrete pavements, which in each case extend the full length of the structure between Delaware and Weccacoe avenues. The pavement on the south side of the building, from which most of the city deliveries will be made, is 65 ft. wide, while that on the north side extends over five tracks, the full width of 68 ft. between the auction sales building and the private sales building now under construction. The paving on the north side of the building where the normal car deliveries will be made, was installed in view of the fact that most of the unloading is done at night, which will permit the use of this side for teaming during the day when the maximum tail-board space is required. Each of the three tracks serving the building has a capacity of 24 cars, which makes possible the spotting of 72 cars at one time for unloading during the night.

#### Cold Storage Warehouse Provides

1,300,000 cu. ft. of Refrigerated Space

The private sales building at the new products terminal has not been completed as yet, but it is planned that



The Auction Rooms Will Provide the Utmost Convenience to the Buyers

of space each floor is equipped with separate record rooms, locker rooms and lavatory facilities. The auction company is also assigned space on the first floor for the small printing plant which it operates in connection with its business at the terminal.

The particular features of the second floor layout are two large auction rooms, one of which has a seating capacity of 200, and the other a seating capacity of 250. These rooms represent an attempt to provide as nearly

this unit will be similar in design and construction to the auction sales building, with the exception that instead of the two stories of office space at the Delaware avenue end, this building will be supplemented by an eight-story reinforced concrete cold storage warehouse. The private sales building, to be 90 ft. wide by 700 ft. long, is intended for the handling of such perishable traffic as is not customarily sold at auction, this, however, requiring practically the same layout as that pro-

vided in the auction sales building. Like the unit previously described, this building will be well lighted and ventilated, with a steam heating system thermostatically controlled so as to permit the carrying on of business regardless of weather conditions.

The cold storage warehouse at the Delaware avenue end of this building will be of reinforced concrete, 90 ft. wide by an average of 195 ft. long, the front face of the building being constructed on an angle to conform to the street property line. This building will be eight stories high, the first floor to be used as office space and a transfer-platform, while the remaining seven stories will be enclosed in a cork insulation envelope for the refrigerated storage of fruits, vegetables, dairy products and other perishable freight. While this building is expected to handle the business presented during the near future, anticipation of increased business has led to the extension of its foundation and first story 216 ft. at the east end of the private sales building, so that when necessary, the cold storage warehouse can be extended over this section as well, without additional foundation or first story work.

The total refrigerated space of the warehouse, as now being constructed, will be approximately 1,300,000 cu. ft., with each floor divided into three principal compartments by cork insulated walls so as to permit the maintenance of the different temperatures necessary to the successful refrigeration and storage of all classes of perishable traffic. With the exception of the first floor and the elevator shafts, the building will be without windows in order to increase the storage space and decrease the amount of radiation, all lighting being effected by electric lights. Other features of the building, which will be modern in every detail, will be the complete installation of an automatic sprinkler system and the auto-

tween, provision has been made for the construction of an enclosed conveyor gallery between the buildings. This gallery, which will provide a passageway about 12 ft. wide by 10½ ft. high, will consist of two light steel trusses enclosed by light, reinforced concrete walls and a light precast channel tile roof. The deck of the gallery will be made up of a concrete slab resting on steel I-beams. The gallery is to be located at the second story level of the warehouse which will put it high enough above the pavement to afford ample clearance for both car movements and trucking.

The gallery will be equipped with two slat conveyors of the Lamson Company type which will extend on an incline from the platform of the auction sales building to the level of the gallery and thence through the gallery to the second floor of the cold storage warehouse. By means of these conveyors, fruit unloaded on the auction sales platform and not sold immediately, can be transferred readily to the warehouse for cold storage, to be returned later to the auction sales platform when desired.

Like the auction sales building, the private sales building and cold storage warehouse will be served by three house tracks, one on the north side and two on the south side, each of these tracks having a capacity of 24 cars. For city deliveries, a concrete driveway 65 ft. wide, connecting Delaware and Weccacoe avenues, is planned on the north side, which will be supplemented in this service by the 68-ft. concrete driveway on the south side which extends over to the auction sales building.

#### Team Delivery Yard Is Provided

with Wide Concrete Driveways

The team delivery yard in connection with the new produce terminal lies directly south of the terminal



Loading Out Fruit from the South Side of the Auction Sales Building

matic regulation of temperatures, which will enable patrons to secure the lowest insurance rates.

All of the refrigeration equipment, including the motors, pumps, compressors, etc., will be housed in the basement of the cold storage warehouse, as will be also the boiler room equipment which will supply heat to the office floor of the warehouse and to both the private sales and auction sales buildings.

In order to put the auction sales building in direct contact with the cold storage warehouse, enabling the direct transfer of products from one building to the other without outside trucking across the tracks be-

buildings, extending the full distance between Delaware and Weccacoe avenues. This yard consists of 14 tracks arranged in pairs, each track having a capacity for 24 cars. These tracks are all stubbed at the Delaware avenue end and are connected into a lead at the Weccacoe avenue end, which has direct connection with the Baltimore & Ohio tracks in Vandalia street.

As the primary purpose of this yard is for the direct delivery of carload lots to buyers, all of the tracks are served by concrete driveways, 50 ft. wide, laid between each pair of tracks, the only exceptions to this being the most northerly track which is served by the 65-ft. pave-



ment adjacent to the private sales building, the track adjacent to the 65 ft. pavement serving the south side of the auction sales building, and the most southerly track in the yard which is served by a private extension of Ritner street, 39 ft. wide.

While much of the display and inspection of products is expected to be on the driveway side of cars in fair weather, the necessity for doing this in bad weather has been obviated by the construction of concrete platforms at car floor height between each pair of tracks, covered by butterfly type sheds. These platforms are only about four feet wide but provide ample space for passage between the cars and for the display of samples from each



The Freight Room of the Auction Sales Building Affords Ample Space for the Contents of 150 Cars

carload lot. The sheds over the platforms have tar and slag protected, matched board roofs which are supported on cast iron columns.

In order to facilitate inspection at night, the platforms are well lighted by drop lights from the roof, supplemented by the provision of lighting circuits along both sides of the platforms, with plugs at frequent intervals for connecting extension circuits for lighting within the cars. In order to facilitate the pulling and spotting of cars at night, and any delivery of fruit and vegetables which may take place after dark, the terminal is equipped with a flood lighting system. This system provides flood light towers at the west end of the terminal, between, and on the outer sides of the auction sales and private sales buildings, which illuminate the driveways to these buildings, and also towers in the yard extending above the roofs of each inspection shed, at the first and third quarter points, from which flood lights illuminate the driveways between the tracks in both directions.

While the new produce terminal will be owned and operated jointly by the Baltimore & Ohio and the Reading, the former road assumed direct charge of its design and construction, the work being done under the general supervision of L. P. Kimball, engineer of buildings of the Baltimore & Ohio, and carried out under the direct supervision of Richard Mather, district engineer, who is represented on the ground by L. A. Houser, field engineer. The auction sales building, driveways and inspection platforms were constructed under contract by the U. G. I. Contracting Company,

Philadelphia, Pa., while the construction of the private sales building and cold storage warehouse is being carried out by the Hughes-Foulkrod Company, Philadelphia.

Beginning with the opening of the auction sales building on November 1, all of the sales in this building are conducted by the Philadelphia Auction Company. With the completion of the cold storage warehouse in February, 1927, this unit will be leased to Horace P. Ser-rill of the Quaker City Cold Storage Company, Philadelphia.

## Report on St. Lawrence Waterway Project

WASHINGTON, D. C.

**P**LANs for the improvement of the St. Lawrence river between Lake Ontario and Montreal, for both navigation and power purposes, as part of the plan for making the Great Lakes accessible to ocean-going vessels through channels 25 feet in depth, at an estimated initial cost of \$350,100,000 to \$385,300,000 according to alternative plans submitted, are recommended in the report of the Joint Board of Engineers appointed by the governments of the United States and Canada made public on November 24.

The estimates for the works proposed by the board, with hydro-electric machinery completely installed, exclusive of interest during construction, are \$394,000,000 and \$423,000,000, depending on whether a single-stage or a two-stage development be adopted in the International Rapids Section, with an installed capacity of 2,730,300 horsepower or 2,619,000 horsepower, but the board considers that "sound business management will dictate the initial installation of but part of the hydro-electric machinery with its housing and accessories." With a total installation of 1,365,000 horsepower, the initial cost, including all features required for navigation and with complete channel enlargement for winter power operation, becomes respectively \$350,100,000 and \$385,500,000.

The plans also outline a subsequent complete development of the power resources of the river with an installed capacity of approximately 2,500,000 horsepower, at an additional cost of approximately \$225,000,000. The total ultimate development "visualized" by the board amounts therefore to approximately 5,000,000 horsepower at a total cost of from \$620,000,000 to \$650,000,000.

The board finds that the scheme as presented in a report in 1921 made by W. A. Bowden and Col. W. P. Wooten is in its broad lines practicable but should, in its opinion, be modified to provide the best advantage for the development of the capabilities and possibilities of the waterway and that the estimates of cost should be revised. The 1921 report had included an estimate of the cost of providing a 25-foot channel between Lake Ontario and Montreal and the development of 1,464,000 horsepower at \$252,728,200.

It is estimated that the waterway can be opened to navigation in from seven to eight years from the time that active work has begun.

The Joint Board of Engineers consists of three engineers appointed as advisers to the St. Lawrence Commission of the United States, of which Commission Secretary Hoover of the Department of Commerce is chairman: Major-General Edgar Jadwin, chief of engineers; Col. William Kelly and Lieut. Col. George B. Pillsbury; and three advisers to the National Advisory

Commission of Canada: Duncan W. McLachlan, of the Department of Railways and Canals; Olivier O. Le Febvre, chief engineer Quebec Streams Commission, and Brig. Gen. Charles Hamilton Mitchell.

Navigation on the St. Lawrence from Lake Ontario to Montreal is now provided by isolated channel improvements and a series of side canals around the rapids which afford 14 feet depth. The channels between Montreal and the sea have been dredged to a depth of 30 feet and a project to provide a 35-foot depth is about half completed. The completion of the new Welland ship canal will open Lake Ontario to lake navigation, which will then be separated from deep-sea navigation by the 183 miles of the St. Lawrence above Montreal. The plans have been prepared, the report says, in accordance with the recognized principle that the interests of navigation on the St. Lawrence are paramount but that the improvement of the river for the joint benefit of navigation and power affords, as a rule, much better navigation than could be secured by the improvement now economically justifiable in the interest of navigation alone.

The 25-foot waterway as designed has an estimated traffic capacity of 24,000,000 tons per annum after any flight locks included in the adopted plans have been duplicated. With the alternative plans the initial capacity of the waterway would be 16,000,000 tons per annum until the duplicate locks are completed.

The American section of the International Joint Commission will meet on December 10 to consider the plans recommended by the engineers and later will present its conclusions to President Coolidge. A report of the Army engineers on an all-United States waterway through New York state is expected to be presented to Congress shortly.

## Commerce Department Comments on Railroad Efficiency

WASHINGTON, D. C.

**"THE** constantly rising efficiency of the railroads" is emphasized, the Department of Commerce says in its annual report, by the fact that the increased freight traffic as compared with the preceding year has been handled with practically no change in the number of employees. The report says in part:

The constantly rising efficiency of the railroads is emphasized by the fact that this greater traffic was handled with practically no change in the number of employees. The ton-mileage in the last fiscal year exceeded that of the fiscal year of 1913 by 43 per cent and of the fiscal year of 1922 by 34 per cent, while the number of employees was only 2 or 3 per cent greater than before the war and 9 per cent greater than in 1921-22. Greater economy in operation appears in the heavier tonnage per train, in the greater mileage of cars per day, in the reduced number of locomotives and cars in bad order, and in various other operating indexes. The shippers and the general public as well as the railroads have profited greatly by this progress. Car shortages and delays of traffic tend to raise the commodity prices to the consumer and to cut down the income of producers. Such shortages and delays have been greatly reduced. Prompt delivery of goods has made possible the carrying of smaller stocks, thus not only lessening the cost of doing business but also reducing its risks. Much of the credit for the improvement of the railroads is due to the recently established regional advisory boards of shippers and receivers of merchandise, which have continued to function actively throughout the United States.

There still remain important transportation problems to be solved, such as extension of terminals, adjustment of rates, adequate development of internal waterways, and establishment of proper relations of the motor truck and bus to the railroad. It is essential that our transportation facilities keep pace with our increasing production.

An outstanding development of the year is the increasing use of the motor truck and motor bus in conjunction with other forms of transportation. Transportation experts are beginning to comprehend the possibilities of the motor vehicle as a co-operative instead of a competitive factor. Over 50 railroads in the United States and Canada are now using motor trucks to supplement their shipping service; nearly as many more are availing themselves of the motor bus. Quite a number of railroads are experimenting with store-door delivery, some 30 or more use the truck in terminal operation, and several have now replaced way freight trains with the motor truck. One of our largest railroads has replaced local freight trains on 1,000 miles of line and is serving 500 stations with the motor truck. Furthermore, over 14,000 miles of motor-bus routes are operated by electric railways. Developments such as these warrant increasing attention to the possibilities of the use of the motor vehicle as an adjunct to other forms of transportation.

## Collisions With Track Cars

**THE** Bureau of Safety of the Interstate Commerce Commission, in its regular program of train accident investigation, has made reports on two collisions between trains and gasoline motor cars, known as track cars; small four-wheel cars which are used to transport gangs of workmen, and which commonly occupy the main track without either timetable or train order authority. Cars of this class have each of the two wheels of a pair insulated, one from the other, so that they do not affect in any way the track circuits of automatic signals.

On the Virginian Railway near Rock, W. Va., October 6, westbound extra freight 107 collided with eastbound motor car 892, to which was attached a four-wheel trailer loaded with tools; and the track car was wrecked, though the locomotive was only slightly damaged. Two repair men riding on the motor car were killed and four others were injured. The dispatcher had authorized the motor car to proceed eastward from MX Tower on the assurance that westbound trains would be held at Kegley; when, in fact, extra 107 had already left Kegley and its record was overlooked. The dispatcher said that possibly his error was due to the fact that the train sheet, at which he had glanced, was on a new form, recently adopted because the dispatching district had been extended to cover territory from Princeton to Elmore. Princeton formerly had been shown at the bottom of the sheet while now it appears near the center.

At Gibson, Ind., on October 7, westbound passenger train No. 41 of the Michigan Central ran into a track car of the New York Central, at the crossing of the two railroads, and four carpenters on the track car were killed.

A fifth man was injured and only one of the six on the car was able to give information at the hearing. The track car was moving south on the northbound track and in order to proceed over the crossing, the men in charge had to lift the car over a derail. The men on the track car had a good view of the line on which the passenger train was approaching (with the exception of a slight obstruction of two small buildings) and the neglect of all hands to look out for danger at the crossing cannot be explained. The towerman at the crossing, on seeing the approaching motor car, threw up his hands in an endeavor to warn the carpenters of the impending danger, but none of them apparently realized the situation. The towerman thought that possibly his motion with uplifted hands may have been mistaken by them for a proceed signal, or for a friendly salutation.

According to the towerman, it is common practice to lift cars over derails which are set against them, except that employees of the Western Union Telegraph Company usually wait for the derail to be cleared.



# Factors in the Use of Freight Cars\*

*The effect of the depreciation policy—Is the 50-ton box car generally justified?*

By L. K. Sillcox

General Superintendent Motive Power, Chicago, Milwaukee & St. Paul

ONE of the leading tasks confronting the Traffic and Operating Departments today is the scarcity of cars and their low average daily movement. Statistics show that a freight car travels about 30 miles in 24 hours. We know from actual experience that loaded freight cars are moved while they are in transit, with very few exceptions, at a speed of not less than 20 m.p.h., and quite often at 40 m.p.h. If a car runs over 20 miles of track in an hour, it will cover 30 miles in one hour and thirty minutes. We then must ask ourselves what the car is doing the other 22 hr. and 30 min. of the 24 hr. It is evidently standing still, being switched, or running empty. A part of each of the above items is unavoidable. We are sometimes told that no means of improvement are known, under present conditions, and it is suggested that more unloading tracks be provided at terminals. We also hear demands for more cars and locomotives. But, when all is said and done, we need to emphasize the fact that the best kind of systematic work must be obtained from seven of the most important subordinate officers, without whose co-operation the work of the most exacting and energetic executive is sure to fail.

These officers are the enginehouse foreman, the car foreman, the chief dispatcher, the trainmaster, the traveling engineer, the yardmaster and the freight-house foreman. We need to have the most intelligent and best inspection, lubrication and light repair work on locomotives and cars before each trip to obtain maximum uninterrupted mileage. A breakdown on one locomotive or one car will delay the whole train and a large number of disastrous derailments can be traced to careless or indifferent work on the part of the inspectors. Careful work by inspectors will also diminish terminal delays and the attendant lost motion. All employees, connected in any way with the movement of a train, should perform their duties strictly on schedule time, i.e., to put locomotives through the enginehouse for the return trip as quickly as possible, to discover a way to eliminate extraordinary delays between terminals, and to avoid delays to trains or road engines by switch engines at any time. Successful car movement can only be accomplished by painstaking work by those who are out in the field and in a position to watch and note every move that is made. This kind of supervision cannot be accomplished over long distance telephone or by telegraph. The local officers need to detect the apparently insignificant things which impair the efficiency of the system, because railroad employees as a class, while doing the great bulk of their work conscientiously and well, are prone to slight the little things unless closely watched by their superior. These so-called trivial things or circumstances, too numerous to list, are known to the practical man by intuition and actual acquaintance. If taken advantage of, they mean much in the proper

dispatchment of cars and locomotives with a view toward maximum utilization and a proper minimum necessary investment for facilities and equipment to handle a given unit of business.

## Intensive Use of Cars

No greater responsibility confronts the administrations of the various railroads than that of attaining greater utilization of equipment, materials, man-power and facilities. When considering the latter, it can be quickly appreciated that this feature not only involves more mileage and more tonnage with fewer units of equipment, but also takes into account the problem of advance in design to attain greater service. It may be assumed that design and utilization are co-relative in that the production of satisfactory construction must naturally keep pace in the development of the use of facilities. In order that these features may be advanced in proper relation to each other, there should be a thorough knowledge of the rate at which obsolescence accrues or exists in any given property, knowing that it will generally require a term of years in order satisfactorily to dispose of practices and establishments which may have been in force for some time.

Full utilization of freight train cars is not entirely a question of mechanical administration. It depends very much upon other factors, such as road, yard, shop and terminal facilities, as well as prompt handling of empty cars. This, to say nothing of the necessity for uninterrupted road movement of trains, through the provision of passing tracks sufficiently long to meet modern tonnage requirements; to have trains properly blocked so that they may run between two terminals a maximum distance apart without interruption; to provide road and grade conditions of such a character that freight train movement can be carried on for a maximum economical distance at a proper rate of speed without disturbance; efficiency of train loading, dispatchment, etc.

Freight train cars are capable of performing more hours of service and attaining greater mileage per day than are now accomplished. Every carrier is confronted with the serious problem of proper design and in the spacing of engine and car terminals in relation to obtaining maximum utilization per day for all classes of equipment with consequent speeding up of average train movement. By utilization is meant the miles run per car per day, the days serviceable per year, and the tons hauled per day. If new and overhauled cars are not of modern design, the object to be attained is not accomplished in the full sense of the word. In order to arrive at a maximum utilization with an economical maintenance cost, the officers in charge should have full knowledge of the performance of such equipment. Obsolete freight car maintenance, shop and terminal facilities should be studied and corrected if possible.

The study made in 1925 by the Car Service Division of the American Railway Association of the average loading of freight cars with various commodities carried

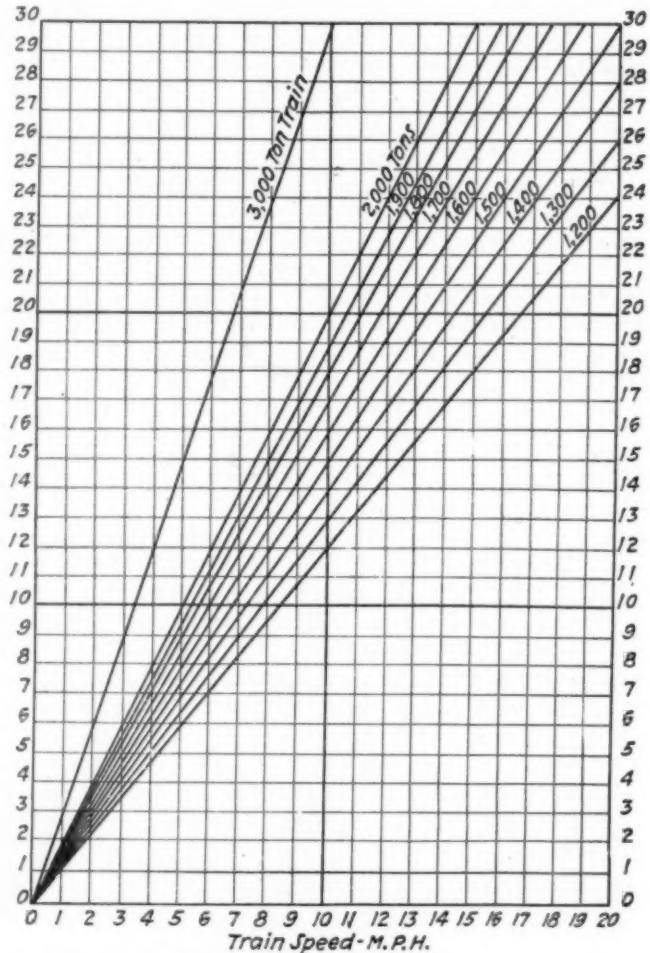
\* Abstract of paper to be presented on December 7, 1926, before the Railroad Division at the annual meeting of the American Society of Mechanical Engineers.

by Class I railroads in the United States, with a comparison for 1923 and 1924, indicates what use is being made of the freight cars and provides a means of determining to what extent the carrying capacity is employed by the various lines of industry and by the shipping public in the various districts of the country. The average of all cars loaded is influenced greatly by the character of traffic, which changes not only from year to year, but also during different seasons, so that to attempt a study of the utilization of freight cars, a number of factors must be considered, requiring careful study of the detailed data. The average freight car load for 1925 was 27 tons, the same as in 1924, compared with 27.9 tons in 1923 and the high average of 29.3 tons in 1920. Table I shows the number of tons in cars for carload freight according to the district in which the tonnage originated. This does not include l.c.l. merchandise.

A detailed study of this information will show wide differences in the car loading as between railroads serving the same territory and covering specific commodities. For example, the loading of wheat in the section west of Chicago is 35 tons to the car on some roads, while others are obtaining as high as 44.9 tons, a difference of 9.9 tons to the car, or 28 per cent, accounted for almost entirely by a difference in car carrying capacity. For lines serving the eastern section of the country out of Chicago, the average loading fluctuates from 35.4 tons to 46.4 tons, or 31 per cent. Conditions of like nature can be observed with regard to practically every other commodity. A study, therefore, of the statement prepared by the A.R.A. Car Service Division and an investigation by all railroads of the conditions on their line, should, by obtaining co-operation on the part of the shippers, encourage greater use of the individual freight car. It should suggest the most economical carrying capacity for freight cars and eliminate any possible wastefulness in practice. This should result in considerable benefit in the direction of economical and efficient service. It should be remembered on the other hand, that the total tons per car one year compared with another, means nothing unless all factors are taken into consideration. As a matter of fact, the present year may show the heaviest tons per car of any year up-to-date, and if so, will undoubtedly be brought about largely by the great increase in the production of mines, including sand, stone and gravel.

The performance of cars, locomotives and trains is a matter of sufficient importance to justify much study. Train runs are on a more or less arbitrary and specific basis, but car runs intermingle. Cars are picked up enroute between terminals, handled at terminals, set off between terminals, etc. The handling of cars may be divided into two groups, i.e., on the road and in terminals. Handling on the road shows that the average speed of freight trains was 11.8 m.p.h. in 1925 and the average miles run per car per day was 28.3. If all cars could be handled from terminal to terminal without interruption at 20 m.p.h., in eight hour runs this would mean 160 miles per day. The train speed of 11.8 m.p.h.

expresses delays enroute for intermediate switching, meeting trains, held by signals, etc. It would seem that much attention should be given to roadway dispatching and facilities to increase train speed by eliminating movement interruptions because the investment involved would not be in proportion to the investment necessary in equipment if train tonnage were to be further increased. For every mile per hour increase in train speed (terminal to terminal time), the gross ton-miles per train hour factor is increased by an amount equal to



Resultant Gross Ton Miles per Train Hour, with Train Miles per Hour and Gross Tons per Train Considered as Factors

the train tonnage. A 1,200 train at 8 m.p.h. will produce 9,600 gross ton-miles per train hour; at 9 m.p.h., this will increase the gross ton miles per train hour to 10,800.

Therefore, when train tonnage cannot be controlled definitely because of fluctuation in traffic volume, it still remains within the control of a railroad to increase train speed, as every factor of speed increase is an equivalent of increase in gross ton miles per train hour. The lowest speed recorded for all Class I railroads in 1925 was 10.6 m.p.h., and the highest 15.9 m.p.h., or a difference

TABLE I.—NUMBER OF TONS IN CARS CLASSIFIED ACCORDING TO PRODUCT AND DISTRICT OF ORIGIN

District	Products of agriculture			Animals and products			Products of mines			Products of forests			Manufactures and miscellaneous			Grand total, all carload traffic		
	1925	1924	1923	1925	1924	1923	1925	1924	1923	1925	1924	1923	1925	1924	1923	1925	1924	1923
Eastern	22.0	21.8	21.9	12.8	12.8	12.7	48.9	48.6	48.0	24.2	24.5	23.8	24.2	24.1	23.9	32.7	33.2	33.3
Allegheny	22.0	21.2	21.4	13.4	13.5	13.3	52.8	52.0	51.0	25.9	25.8	26.2	28.4	28.3	28.8	38.6	38.5	39.3
Poconos	16.6	16.5	17.7	12.0	11.6	11.8	57.4	57.4	56.7	27.3	27.3	27.6	26.1	26.5	27.6	51.8	50.7	49.5
Southern	16.4	16.5	16.9	11.7	11.8	11.6	48.1	47.6	47.0	25.4	25.5	26.1	24.4	24.1	24.1	31.5	31.1	31.5
Northwestern	30.9	31.6	30.9	11.3	11.2	11.3	50.5	49.2	32.4	32.4	32.5	32.3	27.7	27.2	27.5	35.2	34.2	35.3
Central Western	25.7	27.6	26.6	11.5	11.5	11.4	46.9	46.7	46.4	30.1	30.2	30.7	26.7	26.7	26.1	30.7	30.7	30.5
Southwestern	20.3	22.1	21.8	11.8	11.5	11.7	43.2	43.3	43.0	26.2	26.4	27.3	26.4	26.3	26.7	28.3	28.4	28.4
Total all districts	23.4	24.4	24.1	11.8	11.7	11.7	50.3	49.7	49.1	28.0	28.1	28.4	26.1	26.0	26.0	34.4	34.1	34.5



of 50 per cent. This is a wide range and doubtless the lower figures can be improved with no increase in the cost. Train speed should not be construed to mean actual running speed, but the average rate at which the mileage is produced from initial to final terminal. It is improved by eliminating elements which delay train movements so that the hours consumed from initial to final terminal may be reduced. The elements which retard train movement are:

a—Too great a frequency of tonnage revision due to improper assignment of power.

b—Unbalanced regulation of tonnage movement in through and way freight trains, which should be corrected to eliminate, as far as possible, delays due to set-outs and pick-ups, road switching, etc.

c—Dispatching of trains to eliminate delays for train meets, standby losses on sidings, etc.

d—Siding and passing track arrangements to prevent complete stops.

e—Spacing of trains, etc.

Unfortunately there is no specific data to show terminal movement, but it may be considered as a retarding factor under present operation. It is essential that yard lay-outs be improved so as to permit cars to be worked through more rapidly. In order to overcome the present retarding factors, longer locomotive and train runs have been instituted with the hope of eliminating terminal delays as far as possible. This is a move in the right direction, but should be further improved by proper terminal facilities, in conjunction with appropriate placement of sanding, coaling and watering stations and suitable volume and quality of water supply where required.

Improvements have been made in locomotive performance. Fuel consumption per thousand gross ton miles has been reduced from 197 lb. in 1920 to 159 lb. in 1925, or 18 per cent. Trains have been more carefully handled because of better maintenance of air brake equipment and education of trainmen, so that payments made for loss and damage to freight decreased 69 per cent in the same period. This was assisted somewhat by the better condition of freight cars. Gross ton-miles per train hour have improved likewise by reason of a slight increase in train speed and a marked increase in train tonnage, the latter being brought about by better train assembling and the use of larger power units. Car shortages have disappeared for some time because of better distribution and movement. Empty car mileage, on account of characteristics of traffic, has remained about the same. The physical condition of freight cars and locomotives has improved as a result of better maintenance and at the same time the cost per unit of such work has been reduced.

### Maintenance Affects Utilization

#### Less Than Terminal Handling

While freight car miles per day have increased from 25.1 in 1920 to 28.3 in 1925, yet this has not been an expression of ultimate utilization, because the character of maintenance accorded has aided in the matter of availability. Freight car maintenance may be divided into two groups, one pertaining to heavy repairs and the other to light or running repairs. Heavy repairs become due in periods of about once every 8 or 10 years, whereas running repairs and inspection are a continuous necessity. While terminal handling may be considered the greatest retarding factor of freight car movement, repairs may be considered as an important element. The bad order car situation has improved materially in the last few years, and this applies to cars held out of service for heavy repairs. Cars requiring running repairs are usually not held more than a few days. The follow-

ing shows a comparison on 100,000 individual units which were specially tabulated for a wide range of territory, of the car parts causing delays for repairs other than periodical overhauling, on account of which the cars must be taken out of service and placed on repair tracks:

CAR PART	PER CENT
Air brakes.....	26.00
Body work.....	17.20
Door work.....	2.90
Roof.....	1.50
Safety appliances.....	5.00
Trucks.....	12.00
Draft gears and underframes.....	14.00
Wheels, general.....	13.40
Wheels, slid flat.....	1.50
Operating conditions.....	6.50
Total per cent.....	100.00

This indicates that defective air brakes and bodies represent the largest cause for taking cars out of service. Next in order are draft gears, underframes, trucks and wheels. Much has been said about the design of the body and underframe and the importance of a proper design is indicated by this statement. The trouble is usually experienced with cars which were designed and built from 8 to 10 or more years ago. The character of materials in the manufacture of wheels is a vital matter as their renewal period is probably more frequent than should appear necessary, considering that they have a life of about 60,000 miles only.

The bettering of design, now being worked out, is with a view towards reducing the frequency of attention to vital parts. While this may add to the initial cost of the car. The increase is very small in proportion to the resultant maintenance expense and serviceability of the car. Where 5 per cent or less of the cars are out of service for repairs the condition is considered normal and it may be generally understood that this factor is not as great in the retardation of car movement as terminal handling.

Expressed in another way, carriers having a long haul per ton are, as a general rule, more prosperous than those having a short haul per ton. The frequency of terminal handling is, therefore, to be considered more seriously than maintenance at this time.

### Depreciation and Retirement Factors

The problem of proper freight train car utilization and maintenance is not solved merely by low unit cost for repairs or even by a large car supply. For instance, if 50-ton box cars will carry the prevailing grain tonnage, and if that represents a majority of the business offered, such class of equipment should be employed to save track room as well as detailed maintenance and to make it possible to retire two old cars for one modern unit. If an economical unit cost is to be attained constantly, it is necessary to consider the rate to which obsolete cars are retired and new ones acquired to maintain a proper complement of equipment. Take for instance the case of an administration applying the following rates of depreciation to their freight train cars:

Prior to July 1, 1907 (charged to Profit and Loss).	
July 1, 1907, to Dec. 31, 1912.....	1½ per cent
Jan. 1, 1913, to Dec. 31, 1915.....	1 per cent
Jan. 1, 1916, to Dec. 31, 1920.....	2 per cent

These rates are used merely to charge a certain amount to operating expense each month and to make a corresponding credit to "Reserve for Accrued Depreciation," which is built up month by month. Under these circumstances, even where the highest rate of depreciation was charged at 2 per cent, it would involve a total life expectancy of 50 years (neglecting salvage). The manner in which this would affect a railroad, if it desired to retire a car built July 1, 1900, at 20 years of

age, the original cost of which was \$1,000 and the salvage value of which is \$200, is as follows:

240 mos. (20 yrs.)	
Times the cost less salvage, charged to profit and loss.....	\$186.00
July 1, 1907 to Dec. 31, 1912, or 5½ years at 1½ per cent on \$1,000, less salvage.....	\$66.00
Jan. 1, 1913, to Dec. 31, 1914, or 2 years at 1 per cent on \$1,000, less salvage.....	\$16.00
Jan. 1, 1915, to Dec. 31, 1920, or 6 years at 2 per cent on \$1,000, less salvage.....	\$96.00
	\$364.00

This means that at the time of retirement a road so situated would have remaining to charge to operating expenses under the retirement account the following:

Investment .....	\$1,000
Salvage recovered.....	\$200
	\$800
Depreciation accounted for.....	\$364
Remaining to charge to operating expense.....	\$436

Contrast this with another administration using a 6 per cent rate of depreciation:

Original cost .....	\$1,000
Salvage .....	\$200
	\$800
Profit and Loss.....	\$186
6 Per cent for 13.5 years.....	\$648
Accumulated .....	\$834
To be written out.....	\$800
Over depreciated.....	\$34

This makes a credit of \$34 to operating expense. It might result that an administration following such a practice would permit the only factors taking equipment out of service to be physical condition and obsolescence, and under such circumstances the maintenance expense on a property, so situated might run 25 per cent below that of the first administration. In one case all charges would be made to depreciation; in the other case they would be split between depreciation and retirements, but both are in operating expense.

In checking up the average age of cars held by various administrations, we find it ranging from 18 to 35 years. It is important, therefore, to observe the policy of more frequent renewal and fewer heavy repairs or rebuilding, as it would seem to be more economical than extended life. The accounting rate of depreciation, which is usually a straight line rate, has a serious indirect bearing on the policy of maintenance which is employed. Proper turnover is the easiest and the most economical means of reducing repairs and overcoming obsolescence, because it is in the end, very costly to extend the life of equipment to avoid the burden on operating expenses of writing out the equipment.

#### Aspects of Design

In 1901 the Pennsylvania built the first 50-ton box cars because of having a greater earning capacity than the 40-ton cars. An analysis of the real benefit in operating 50-ton box cars must take into consideration two important points, viz., can the greater loads they can carry be obtained? If so, what is the greater carrying capacity during a given period over and above the additional first cost? What is the cost of hauling the extra dead load of the heavier car?

Many thousands of 50-ton capacity box cars have been added to the equipment of the railroads in recent years and large numbers are now under construction for future delivery. It seems not inappropriate to raise the question as to whether the results obtained from the use of the 50-ton car in actual service will justify its extended employment in most localities as a standard car, in place of the 40-ton car. Will these results, when properly analyzed, not show that the 50-ton car, from a practical

or commercial standpoint, can only be regarded as a specialty and confined to a particular class of traffic in a territory where the limits of its usefulness are governed by well determined lines of demarcation? An analysis of this subject necessarily involves a collection or compilation of itemized data on the essential factors that have a bearing on the relative value of this car compared with the others above mentioned. Among the most important factors are the following: first cost of the car; capacity of the car (cubic contents and car weight); average load carried in tons; conditions which militate against full load; cost of maintenance; extra cost of hauling additional dead weight when moved with less than full capacity, and extra cost for maintenance of permanent way, bridges, etc.

A fair comparison can be obtained only by actual experience with a large capacity car under operating conditions, and it should be borne in mind that such only tends to show the value of the car in the particular territory where it is in service and where the comparisons are being made. Therefore, it would be interesting and valuable if a complete report could be had of the results obtained by the use of a given number of 50-ton cars in comparison with others. This report should cover a period of two or three years, furnishing the exact figures and facts, so that others who are contemplating the addition of new and heavier equipment may be better able to reach a correct conclusion as to the type of car best adapted for the locality through which their lines run.

Some observations of a general character may serve to emphasize certain points of more or less interest. The Union Pacific and Southern Pacific have in service thousands of 50-ton cars, and have had cars of this capacity in service for more than 20 years. Such equipment, as a rule, is loaded to a point reasonably near its capacity for the entire haul, over the owner's lines. This, of course, is an unusually favorable condition of service for the 50-ton cars and gives them the place at once among the improved facilities that count for increased net earnings. As further evidence of this, an enumeration of some of the various commodities handled at different points on the line and the quantity in percentage of the car capacity which enter into the general average attained are as follows:

Commodity	Car capacity per cent
Wheat .....	107.1
Corn .....	81.7
Barley .....	85.1
Other grain.....	100.4
Ore and bullion.....	114.6
Coal (largely in box cars).....	84.0
Coal (open top cars).....	106.0
Gravel .....	109.0
Beets .....	101.4

#### Fifty-ton Car Has Economic Limitations

This also affords an excellent insight into the contention made by many that there is a special field for the 40-ton car, which the 50-ton car cannot invade without a positive loss, either direct or indirect, to the operating companies. Their field is the one where such commodities as hay, merchandise, mill stuff and miscellaneous products predominate and where conditions necessitate their movement in a manner to suit the shipper, regardless of the wish of the carrier. Furthermore, it is not within the range of possibilities for the carriers to educate their shippers so as to secure the delivery of their traffic of this character for movement at a time and in a manner that will permit a prompt and full car-load movement at a specified time. Ore, coal, grain and similar commodities, are regulated by the train load rather than by the car load and are offered for shipment



at a time and in such quantities as not to require movements of less than the maximum train load.

The freight car mileage for 1925 was 26,729,831,000 miles; of this, 35 per cent was empty car mileage, which would indicate that there were many lines operated under a condition where it was almost impossible to secure loading in both directions for their cars. While this is doubtless largely the case with roads that are essentially coal or ore lines, yet much of it is in the agricultural districts where the empty mileage is box car equipment, handling an average of about 24 tons per loaded revenue car. This would seem to warrant the suggestion, if not the conclusion, that a general utility car substantially built to meet all the physical conditions resulting from interchange service, with minimum dimensions of the American Railway Association's standard box car, of a capacity not exceeding 80,000 lb. is, from some points of view, more desirable commercially, physically and financially, as a common standard for American railroads than the 50-ton car. The latter, however, has been adopted on some of the most important trunk lines and by virtue of the interchange arrangements between various roads forms no small percentage of the cars on the line which would otherwise favor 80,000 lb. capacity equipment.

It seems rather inconsistent, from a business and commercial standpoint, that large trunk lines should spend enormous sums of money in perfecting their permanent way, and other facilities for handling their business, and equally large sums in the purchase of motive power and equipment which is peculiarly adapted to their line and then a large portion of this equipment be diverted into a class of traffic and on to lines where the conditions are at considerable variance with those which hold directly opposite views as to its commercial value.

While much of this modern, heavy equipment is found on roads whose officers question its adaptability to the conditions which they have to meet, a no less conspicuous feature of what might be termed unbusinesslike conditions, is the presence on the large trunk lines of a great number of small, antiquated cars belonging to the lines which do not favor the use of the large car. Many of these small cars were built years ago when the tractive force of our freight locomotives averaged about 35,000 lb. and the original construction of the cars was light. This, together with their age, renders their physical condition such that in some cases they are scarcely safe for service in light trains on local runs and are absolutely dangerous when placed in modern heavy trains handled by large types of heavy freight locomotives. Such a condition is dangerous not only to the cars themselves, but in case of accident they are not only badly damaged, as a rule, but are the direct or indirect cause of destruction to the modern heavier cars with which they are intermixed in train service. The high cost of repairs to freight cars on some lines can be traced to the retention in service, in some cases, of light antiquated equipment that should have been retired from service immediately following the advent of modern car construction.

The more highly developed a railroad becomes in providing fast passenger service and regular freight service, the greater is the necessity for the use of good materials to prevent accidents and provide reliability of movement. When such services are offered to the public, there is imposed a moral responsibility to furnish materials which shall be equal to the service requirements.

Generally, coal cars returning empty to mines make substantially the same number of empty miles as is

made on the loaded haul. There should be a decided saving in operation where larger cars are used. Furthermore, if there is a continued shortage of coal cars at mines in competitive territory during peak business, there would be a further gain in net revenue as a net result of whatever percentage of increased load obtained. Assuming the net earnings per day over and above all cost to handle, is one dollar on a smaller car, then with a larger car representing a 25 per cent increase in carrying capacity, this net would be increased to more than \$1.25 a day (cost does not vary directly with capacity and the net saving will be more). If the car requires ten days to make the round trip, the increased revenue would, at least, be more than \$2.50 for the round trip and would probably result in a substantial net return from the additional net revenue on the additional investment required for the larger cars, providing the peak movement under these circumstances existed during 40 per cent of the yearly period.

#### Cars Should be Designed for the

#### Service for Which They Are Intended

In designing a car, what must be considered is the service in which it is going to run, not the service in which it may run.

One of the advantages given for all steel, steel underframe and steel frame cars, is that train resistance is less than with wooden cars. The principal reasons for expecting a lower resistance with a steel car are: first, on account of its greater rigidity there is less deflection in the bolsters and the side bearings are not in contact under the maximum load; hence, there is less flange friction and a lower tractive resistance; second, the capacity of steel cars is so much greater than that of wooden cars that it is possible to haul the same tonnage in one-half or two-thirds the number of cars, and it has been found that the increase in train resistance for a given total tonnage increases with the number of cars required to equal that given tonnage. This is to be expected from the greater area exposed to atmospheric resistance and because of the large number of wheels producing flange friction. With equal coupler clearance on straight track, there should be no difference in the resistance of the wooden and steel cars, so far as the drawbars are concerned. On the curves, however, the rigidity of the steel draft rigging prevents the coupler from accommodating itself on the normal line of the pull, and if the clearance is too small the wheel flanges are forced against the rail, thus increasing the train resistance. With the wooden car, however, the draft timbers are easily displaced or compressed and the bolts in the wooden draft attachment work to one side and the whole rigging gives enough to provide a movement of the coupler equivalent to greater clearance and sufficient to prevent undue flange friction.

#### Increase in Empty Car Miles

#### Indicates Better Performance

Freight cars are used in common under the A. R. A. car service rules, the per diem agreement and the interchange agreement. They are repaired (with certain exceptions) on the road where the need for the repairs develops. The average freight car of an individual road is at home not much more than one-half of the time. Obviously, if there is a common standard for the types of car used for the great bulk of the interchanged traffic, each road will be required to carry a much smaller stock of repair parts, and there will be a reduction in the time now lost by cars which are held while the repairing road is obtaining parts of special design.

Net tons per car load seems to remain stationary in

the face of improvement in practically all other factors such as net tons a car day, car miles a car day, freight locomotive miles per locomotive day, freight cars per train, gross tons and net tons per train and average speed of freight trains. Empty car miles seem to increase by reason of better performance on the part of carriers. This situation indicates that where an improvement in other directions obtains, a decided increase in the percentage of empty mileage will result, and the sole reason for having an increase in the percentage of empty mileage comes from the fact that administrations are at present moving empties promptly, whereas when they had a low percentage of empty mileage the empties were standing still and there was a shortage of cars. It is felt by the best authorities that as long as we continue to make an improvement in the movement of business we are going to show an increase in the percentage of empty mileage compared with periods when the movement was not so prompt.

### The Problem of Unproductive Weight

To whatever extent the unproductive weight of the train can be diminished, to that extent the productive weight may be increased. It is, therefore, an element of efficient use of tractive force, from a business point of view, that the dead-weight proportion of a train shall be maintained at the lowest point consistent with reliability in performance. If we were to consider the cost of hauling 800 lb. avoidable weight per car, because of using a certain feature of design instead of another of equal engineering value, and in order to save the extra weight it was necessary to pay \$60 extra per car in first cost of the car, and the maintenance features were not affected, the problem would work out as follows:

Average miles per car owned per day.....	28.3 miles
(Includes bad orders)	
Cost of hauling one ton of dead weight one mile by Class I railroads varies largely from \$0.004 to \$0.007, so that by using the mean figure, it should be considered.....	\$0.0055
Considering 6 per cent bad order cars, would mean 94 per cent of 365 days in service, or.....	343 days
Therefore	
800	
2,000	
to pay.	21.36

It should be understood that any figure used, such as \$21.36, is more or less theoretical since the cost of hauling per ton of weight is not directly proportional to the weight carried but rather the relation of full tonnage possibilities to actual tonnage hauled. A carrier having full tonnage trains will have a lower cost per ton mile than one with variable loads of less than full tonnage.



Manhattan Limited East Bound on the Pennsylvania Along the Ohio River

## Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended November 20 amounted to 1,078,812 cars, an increase of 20,889 cars as compared with the corresponding week of last year and of 67,893 cars as compared with 1924. All classes of commodities showed decreases as compared with last year except coal and merchandise but coal loading amounted to 242,013 cars, an increase of 53,145 cars and merchandise loading, 269,468 cars, showed an increase of 665 cars. Coal loading was slightly less than in the week ended November 13, although bituminous coal production for the week broke all previous records. All districts except the Northwestern and Central Western, however, showed increases as compared with both of the preceding years. As compared with 1924 all commodity classifications showed gains except grain and grain products, livestock and forest products. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

### REVENUE FREIGHT CAR LOADING Week Ended Saturday, November 20, 1926.

Districts	1926	1925	1924
Eastern .....	254,381	236,132	230,952
Allegheny .....	271,999	211,060	195,211
Poconantas .....	59,867	58,570	50,430
Southern .....	161,489	157,611	157,117
Northwestern .....	131,364	140,202	132,598
Central Western .....	159,773	164,937	165,534
Southwestern .....	89,959	89,411	79,077
Total Western Districts .....	381,096	394,550	377,209
Total all Roads .....	1,078,812	1,057,923	1,010,919
Commodities			
Grain and Grain Products....	44,475	53,212	59,695
Live Stock .....	33,772	35,780	44,047
Coal .....	242,013	188,868	196,346
Coke .....	12,777	15,207	10,170
Forest Products .....	67,351	68,277	72,030
Ore .....	25,631	31,704	15,345
Misc. L. C. L. ....	269,468	268,803	252,684
Miscellaneous .....	382,325	396,072	360,602
November 20 .....	1,078,812	1,057,923	1,010,919
November 13 .....	1,112,886	1,049,940	1,016,843
November 6 .....	1,137,210	1,068,646	995,279
October 30 .....	1,216,432	1,091,154	1,075,374
October 23 .....	1,209,043	1,120,677	1,113,053
Cumulative total 44 weeks .....	48,536,321	46,600,612	44,180,415

The freight car surplus for the week ended November 15 was 98,704 cars, including 11,321 coal cars, 61,815 box cars and 14,663 stock cars. This was an increase of 10,574 cars in a week.

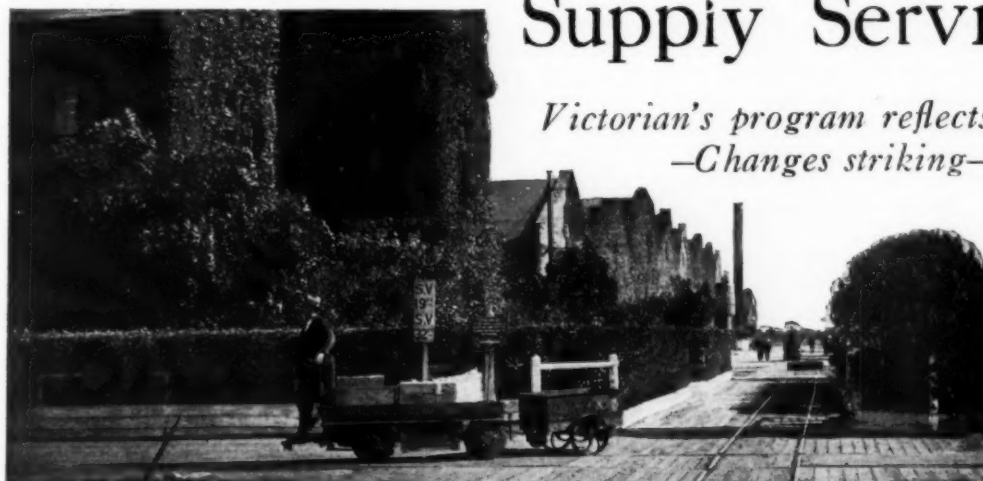
### Car Loading in Canada

Revenue car loading at stations in Canada for the week ended November 20, showed an increase over the previous week of 3,734 cars. There was a decrease of 2,607 cars from the same week last year.

Commodities	Total for Canada			Cumulative totals to date	
	Nov. 20, 1926	Nov. 13, 1926	Nov. 21, 1925	1926	1925
Grain and grain products...	20,959	21,169	23,573	434,913	412,773
Live stock.....	3,240	3,463	3,146	103,630	112,459
Coal .....	9,524	8,531	9,341	281,071	199,226
Coke .....	536	506	511	17,413	13,767
Lumber .....	3,356	3,197	3,360	167,635	164,847
Pulpwood .....	1,176	1,230	1,393	118,067	113,744
Pulp and paper.....	2,326	2,446	2,328	109,544	94,655
Other forest products....	2,708	2,633	2,794	141,833	129,693
Ore .....	1,675	1,607	1,608	81,262	65,999
Merchandise, L. C. L. ....	17,872	15,361	16,274	757,670	707,209
Miscellaneous .....	15,398	14,893	14,248	666,490	601,924
Total cars loaded.....	78,770	75,036	78,576	2,879,528	2,616,296
Total cars received from connections .....	37,222	36,366	35,230	1,718,740	1,535,787



# Australian Railroad Reorganizes Supply Service



Stores Delivery at Newport Locomotive Shops

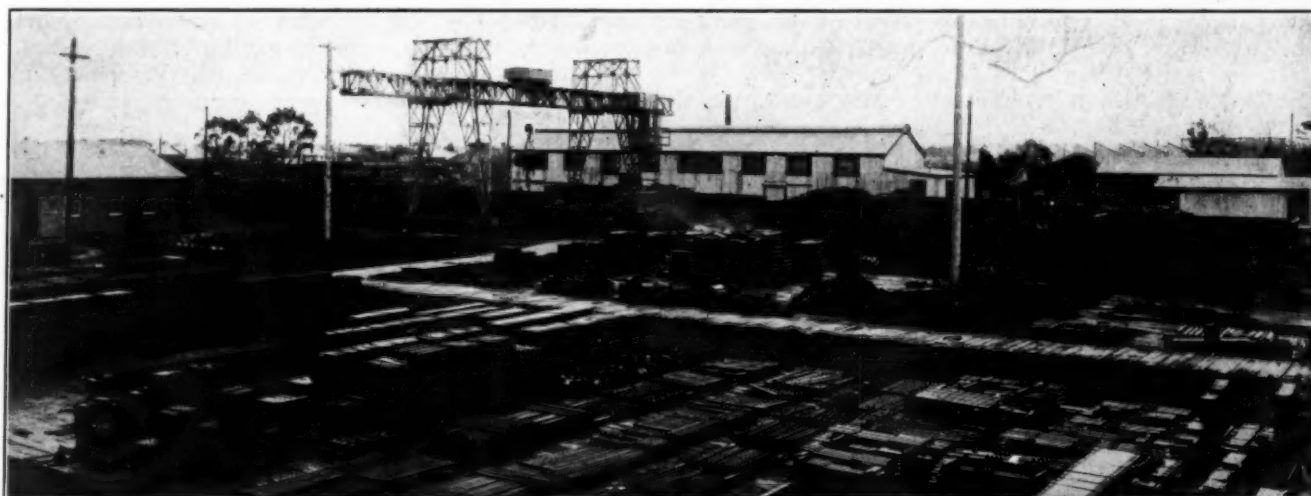
*Victorian's program reflects American practice  
—Changes striking—Economies large*

By  
C. W. J. Coleman  
Chief Storekeeper, Victorian Railways, Melbourne, Australia

THE appointment of H. W. Clapp as chairman of the Victorian Railways Commissioners in 1920, marked the beginning of a new era in the history of the stores branch of the Victorian railways.\* Prior to that time, little attention had been given to the important part which a properly organized stores branch plays in successful railway management, and it was always difficult to obtain appropriations for the proper care of supplies and the development of new activities. The new chairman of the commissioners (coming from a country where the service of supply, and all that goes with it, had been for some time the subject of special and intensive study) was impressed with the need for improvement in

which had been introduced with such success on the Southern Pacific Lines under the H. C. Pearce† system of storekeeping. During this visit, every opportunity was given these officers to study the system. Indeed, the kindness, consideration and help extended by the management of the Southern Pacific was a continual source of surprise and gratification, and made possible a complete understanding of the methods employed there. It was quickly recognized that great benefits would result from the introduction of such a system in Victoria.

The chief storekeeper furnished the commissioners with a report of the investigations immediately upon his return to Australia at the end of 1921. This report dealt



A Partial View of Stores Yard at Spotswood. Note the Gantry Crane and Reclamation Plant in the Distance

this connection, particularly in respect to the physical handling of material, and to the facilities necessary for efficient service.

## American Practice Studied

A full inspection of all the storehouses by the chairman culminated in a decision to send the chief storekeeper and an assistant to America, to view at first hand the facilities for the handling and storage of material and the system

\*The Victorian Railways constitute the largest railroad system of Australia, with a mileage of 4,632; gross revenues of \$62,500,000; handling 8,950,000 net tons of freight and carrying 167,750,000 passengers.

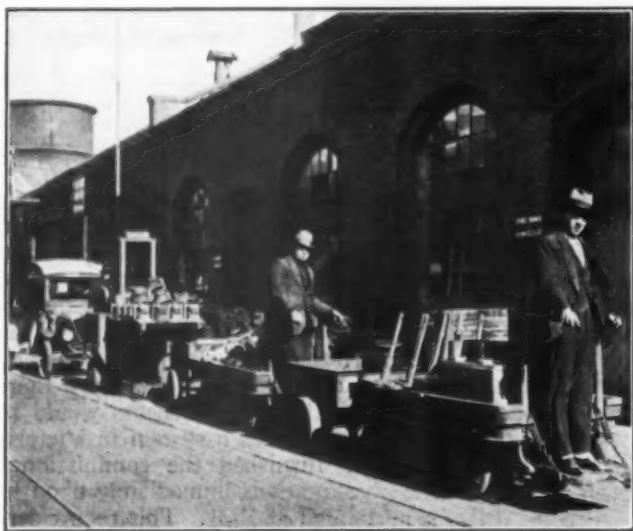
exhaustively with all essential features of the service of supply as viewed in America, and embodied recommendations as to its introduction in Victoria with the variations, additions, etc., required by local conditions. The recommendations were approved by the commissioners, whose sanction was at once obtained to proceed with certain reorganization work necessary to the successful introduction of the system.

The general store was located in the railway yard at Spencer street, Melbourne, Victoria. This building and

†Now director of purchases and stores, Chesapeake & Ohio.

the facilities for handling the material were both out of date and decidedly inadequate for the proper storage of material. It was recognized, however, that if this storehouse was equipped with standard racks, and the new system of operation introduced it would afford a splendid example of the possibilities of reorganization along the lines followed by American railroads. Plans were accordingly prepared showing a full layout of racks, etc., an appropriation obtained, and the work of remodeling at this point commenced in February, 1922, only three months after the chief storekeeper's return from America.

The improvement work was difficult owing to the fact that the storehouse was crowded with material, and room could only be made to place one rack at a time, but it had not progressed far before the benefits to be obtained from



Stores Delivery Equipment at the Newport Locomotive Workshops

standard racks, unit piling of material and use of material trays, etc., became evident. When the work was completed some months later, it was found that a saving of space of approximately 30 per cent had been gained. In addition, the stock was separated and piled in such

at once decided to extend the work to other cities.

The next point which engaged attention was the Newport Locomotive Workshops storehouse, serving shops employing 3,500 men. The existing plant included one central and eight subsidiary storehouses scattered over the property, where it was decided to extend the central

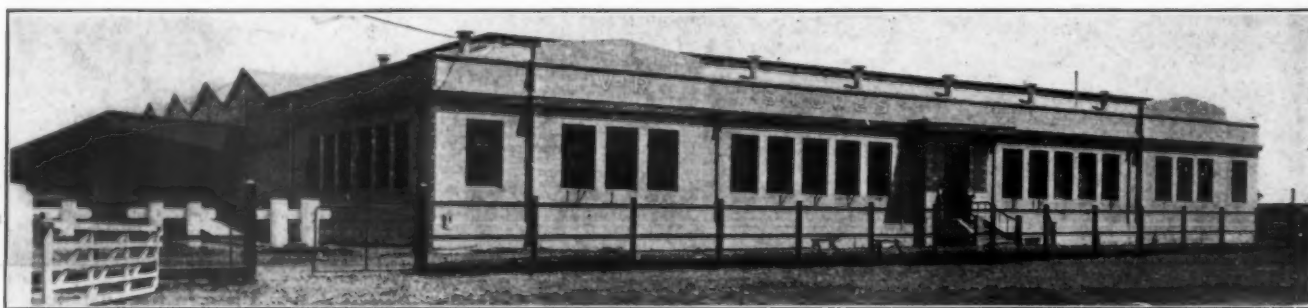


In the Bookkeeping Division at Spotswood

storehouse, eliminate the subsidiary buildings, and put into operation a complete stores delivery system. Consternation prevailed in the shops at these proposals, for stores delivery was unknown. By the end of 1922, however, special track had been laid affording good traffic to all parts of the works and battery trucks had been placed in service, while early in 1923 the storehouse had been transformed, and the whole rearrangement, including the stores delivery, was a pronounced success. This was followed by similar work at other metropolitan storehouses, whereupon the reorganization was gradually and systematically extended to the outlying points, including the material stores in the open yards.

#### Sectional Plan of Operation

In 1923 the work had advanced far enough to allow the introduction of the new system of bookkeeping and



The New General Store at Spotswood Is a Spacious Building of Concrete

a way as to show definitely, at a glance, the quantity of each separate item of material in stock.

All material was grouped into sections, where it was itemized by cards showing standard descriptions by which items would be known over the entire system. Stock or inventory books were installed in each section, and a monthly inventory of stock for ordering purposes became possible. This stage was reached about the middle of 1922, and the success attending this reorganization at the general storehouse was so obvious that it was

accounting. The system now in force is described as follows:

A separate set of rate cards, so called, is installed for each section in the storehouse, in which is a separated card for each standard item of stock. After the material has been received, checked and inspected, the certified invoice is passed to rate clerks, who record receipts on the item card. Likewise, requisitions, etc., covering the issuance of material also pass daily to rate clerks, who record quantities issued and show the balance on the card. As



a guide to rate clerks, the section number and item number are shown on all invoices and requisitions.

Bookkeeping or accounting by classes was the system seen in America, but this department has gone a step farther and introduced the system of accounting by sections. A debit and credit register (cash values only) is installed for each storehouse, and an account is opened for each section in the storehouse; after stocktaking, the value of stock in each section is ascertained and recorded on the debit side in one total for each account.



**Centralization of the Administrative Offices in the New General Storehouse Has Saved Much Valuable Time.**  
Above Is Shown the Ordering Division

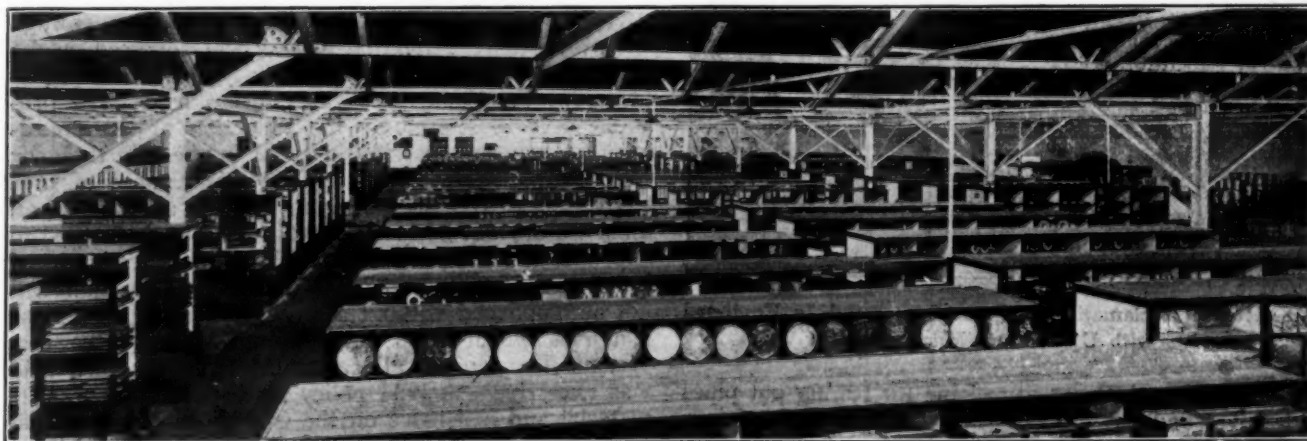
All receipt and issue documents are stamped showing storehouse and section number, and after rating, extending and checking has been completed, the amounts for each section are summarized and the totals recorded on

result of more efficient working conditions and the breaking down of prejudices, surplus and obsolete material was gathered in such quantities that the demand for more room at the larger points became insistent. Again, the various branches of the work had begun to realize that they could function with less stock at depots, and in many cases the practice of carrying stocks was completely eliminated. Roundhouses, supply houses and other store points were refitted and the material completely sifted, with the result that stocks were centralized to a degree far in excess of expectations. The time had come for a new general storehouse.

After a careful review of all land available, a site 12 acres in extent, was chosen at Spotswood, about six miles from Melbourne, and plans were laid for the establishment of a general storehouse and depot here, including storehouses for oil and cement, maintenance of way material, a material yard and facilities for reclamation and scrap, with the locomotive workshops, signal and telegraph workshops, electrical power house, combined way, and works shops, and other large activities, all within a mile of the general storehouse site. Much centralization of material was thus possible.

The work of erecting the storehouse plant, for which £69,000 (\$345,000) was appropriated, commenced in February, 1924, and was completed in September, 1925. No time was lost in transferring to the new location, and the new storehouse was in full operation by October, 1925.

The new storehouse is a single-story building of concrete blocks. It is 165 ft. wide and 365 ft. long. Two large platforms, one on either side, extend the full length of this building, each of which is covered by a roof, which insures protection from the weather. Handling the materials to and from railway cars is done on one side and that to and from motor trucks on the other. This building was not only laid out with regard to all matters essential to the proper conduct of business and the safe storage and custody of material, but also to the comfort of the staff. Centralizing the administrative



**The Interior of the General Store Is Large but Well Lighted by a Saw Tooth Roof Construction**

the debit or credit side of the register. At stocktaking periods, the balance in each section account must agree with value of the stock, ascertained by stocktaking. The frequent checks through the year afforded by the rate cards avoid the laborious work of searching and adjusting, with its demand on the time of employees and the consequent delay to work at the commencement of a new period, and accounting by sections facilitates the location of discrepancies that occur.

In 1923, after the inauguration of these bookkeeping changes, a stage was eventually reached where as a

staff here has meant the saving of much valuable time in handling of documents.

#### **Modern Facilities for Reclamation**

A great deal of time and thought has been given to the subject of reclamation. The large possibilities in this work were known to this department, but prior to the chief storekeeper's visit to America reclamation practices had not been extended to any great length. In 1924, a combined storehouse and reclamation shop was established at Spotswood for the receipt, treatment and stor-

age of all non-ferrous scrap produced on the system. Magnetic separators, shears, a furnace and other appliances were installed. During the first 12 months approximately £20,000 (\$100,000) worth of this kind of scrap passed through this depot for treatment. A system of collecting the non-ferrous scrap from workshops and depots was also instituted by the stores branch, and is operating splendidly.

In July, 1925, a scrap dock 1,150 ft. long by 100 ft. wide was made available for general scrap and reclamation work. The experimental bins for dumping, sorting and storing of scrap which were provided proved suitable and are being extended. A traveling gantry crane with a span of 53 ft. between supports and an extension of 20 ft. on each wing has also been erected. This gantry extends over three tracks, and operates either a magnet or a hook. Until recently, scrap material was handled and sold from various locations, but now that the new plant has been definitely established and the gantry erected, all material for reclamation, storage or sale is being sent to Spotswood. The concentration provides far better results in every way.

A reclamation workshop for the treatment of all track fastenings and many other items of material has recently been completed. This shop is fitted out with up to date machinery, including rumbling, nut tapping, threading and bolt-reclaiming machines, shears, and also a special machine for the cold straightening of spikes and bolts; which does away with the old method of hand reclaiming.

A further reclamation practice installed with success is the reconditioning of cast iron water pipes and fittings.



The General Reclamation Shop at Spotswood Is Equipped with Up to Date Machinery

The small plant includes a machine for testing out pipes and valves and has been the means of reclaiming pipes for use within the metropolitan area.

Another reclamation activity is the dismantling and breaking up of old locomotives. This work, until recently, has been carried out at the locomotive workshops, but it was the desire of the commissioners to clear the shops of all discarded material.

Cross tie reclamation work is also carried out at Spotswood. For some years, great trouble had been experienced in disposing of the ties discarded by the track department. Since July, 1924, when a power saw was installed at Spotswood, all ties released and unsaleable in outlying districts are loaded and consigned to Spotswood to be cut up for firing engines, while the ties released within a radius of 30 miles of Melbourne are sent to

Spotswood and there graded into classes. These classes and the production of each class since the work commenced in 1924 are as follows:

Grade 1	Suitable for	narrow gage.....	7,000 pcs.
" 2	"	" fence posts .....	7,500 pcs.
" 3	"	" use or sale as dunnage.....	35,000 pcs.
" 4	"	" use as firewood.....	7,000 tons

Not only does the department make a good profit from this source, but it also has the satisfaction of seeing the



The Packing and Dispatch Division in the New Storehouse at Spotswood. A Wide Passageway and Counters Similar to Those in the Picture are Provided Between Each Division of Stock

tracks cleared, where before, in many cases the ties would lie for years until they were burned.

#### Stocks Reduced Over Two Million Dollars

This year will mark the completion of the stores reorganization when all storehouses throughout the state of Victoria will be similar in the plan of handling, storage and accounting. Attention will then be focussed on the work of improving the systems established. That benefits from the changes so far effected have been pronounced is illustrated by the reduction of the investment in materials carried in stock in the last three or four years. Notwithstanding the maintenance of protective stocks and the gathering into the accounts of an immense amount of material which had been charged to expenses but not used, the total investment was reduced by over £500,000, or \$2,500,000. This reduction was not accomplished without a struggle, and it needed the examples which were brought into view by the new systems to convince all concerned that the stock held was excessive. A bold policy in disposing of obsolete material and insistence on the use of slow-moving material were also factors in the reduction effected.

During the period covering the work of stores reorganization, this system has been visited by prominent officers from all other states of Australia, also New Zealand, England and America. So satisfied have the visitors been with the example set that similar systems and methods to those instituted in Victoria are now being adopted in practically all other Australian states and New Zealand, as well as in commercial business houses.

In concluding this article, it seems fitting that the writer should refer to the author of the systems and methods of storekeeping adopted, H. C. Pearce, to whom great credit is due for his contribution to the present state of railway storekeeping methods.



# New Accounting Classifications

*Tentative drafts prepared by I. C. C. with co-operation of  
accounting officers made public for general discussion*

THE Interstate Commerce Commission and the Railway Accounting Officers Association mailed to interested parties on November 27 the text of a tentative revision of the Interstate Commerce Commission's accounting classifications for steam railroads. The text is contained in a bulletin—No. 112—of the Railway Accounting Officers Association. It is a progress report and in reality the report of the R. A. O. A. Committee on General Accounts to the membership.

The text of the new classifications was prepared and written in the office of the Interstate Commerce Commission's Bureau of Accounts. Conferences have been held between representatives of the Bureau and a sub-committee of the R. A. O. A. General Accounts Committee and then between the Bureau representatives and the General Accounts Committee itself. The tentative classifications embody the views of the Bureau of Accounts with such recommendations of the accounting officers as have been accepted by the Bureau. Many points are still at issue. These are noted and the views of the general accounts committee relative thereto are given in detail. The tentative classification prepared by the Bureau of Accounts has not yet been accepted by the Interstate Commerce Commission. Chairman Joseph B. Eastman of the commission has, however, sent out requests for comment and criticism. It was expected earlier in the year that the new classifications might be prepared and issued in time to be made effective on January 1, 1927. This hope has now been abandoned and the aim at present is to have the new revision completed in time so that they may be put into effect on January 1, 1928.

The Interstate Commerce Commission's Bureau of Accounts is headed by Alexander Wylie, director; Fred A. Barnes is assistant director. The sub-committee of the Railway Accounting Officers Association which has conferred with these and other representatives of the commission consisted of J. J. Ekin, comptroller of the Baltimore & Ohio, chairman; G. E. Bissonnet, general auditor of the Union Pacific System, and also president of the Railway Accounting Officers Association; W. E. Eppler, comptroller of the Delaware & Hudson; W. B. McKinstry, comptroller of the Central of Georgia, and

John Hurst, assistant comptroller of the Pennsylvania. The R. A. O. A. committee on general accounts, or committee of 25, is headed this year by H. W. Johnson, comptroller of the Chicago, Burlington & Quincy.

The material published in Bulletin No. 112 includes the text of six revised classifications, namely: "Investment in Road and Equipment"; "Operating Revenues"; "Operating Expenses"; "Income"; "Profit and Loss," and "Balance Sheet." There are to be observed in the text no particularly striking or radical changes in the present general scheme of railroad accounting. Rather the effort seems to have been to clarify the language of the classifications. There is to be noted, however, a substantial reduction in the number of primary accounts, notably in the classification of investment in road and equipment accounts and in the classification of operating expenses.

In the case of the classification of investment in road and equipment the number of primary accounts has been reduced from the present 62 to only 42. The accounting officers recommend in this instance the elimination of the primary accounts entirely.

In the case of the classification of operating expenses the present eight general accounts remain as at present except for a change in their order. The number of primary accounts, however, has been reduced from 209 to 125. The reduction has been accomplished by the elimination of 90 primary accounts and the addition of six new accounts. It has been brought about principally by consolidation of the depreciation and retirements accounts under maintenance of way and structures and maintenance of equipment into single accounts under each of the heads respectively of "Fixed Improvement—Depreciation"; "Fixed Improvements—Retirements" and "Equipment—Depreciation"; "Equipment—Retirements." There is a new primary account in each of the two maintenance general accounts designated respectively "Amortization—Way and Structures" and "Amortization—Equipment." There is practically no change in the primary accounts under the general account of Transportation Expenses. The accounting officers association, however, recommends several changes which would reduce substantially the number of transportation primary accounts.

## Investment in Road and Equipment

The table on the following page gives a comparison of the primary accounts in the revised classification of investment in road and equipment with the present classification.

In the new classification are five general accounts in place of the present three and 42 primary accounts in place of the present 62. The two new general accounts are I—"Land" and V—"Investment suspense." The reduction in the number of primary accounts is affected by consolidation of accounts, such as the combining of the present 13—"Right of way fences," 14—"Snow and sand fences and snowsheds" and 15—"Crossings and signs," into a single new account 11—"Fences, snowsheds, crossings and signs" or 51—"Steam locomotives"

and 52—"Other locomotives" into the new 51—"Locomotives." There will also be noted the renaming of present account 20—"Shops and enginehouses" as 15—"Equipment shops" and the change of primary accounts "Shop machinery" and "Power plant machinery" from the present general account I—"Road" to the new general account III—"Equipment."

The Railway Accounting Officers Association general accounts committee has recommended that the classification of investment in road and equipment should have only three general accounts without any primary accounts. The three general accounts proposed by it are: 1—"Road," 2—"Equipment" and 3—"Investment suspense" but in its report it does not give any reasons.

## Present and New Investment Classifications Compared

Present Classification	Tentative Revision	Present Classification	Tentative Revision
I ROAD	I LAND	33. Power line poles and fixtures	III EQUIPMENT
1. Engineering	1. Land for transportation service	34. Underground conduits	51. Locomotives
2. Land for transportation purposes	2. Public improvements	35. Miscellaneous structures	52. Freight cars
3. Grading	II FIXED IMPROVEMENTS	36. Paving	53. Passenger-train cars
4. Underground power tubes	3. Grading	37. Roadway machines	54. Floating equipment
5. Tunnels and subways	4. Tunnels and subways	38. Roadway small tools	55. Work equipment
6. Bridges, trestles and culverts	5. Bridges	39. Assessments for public improvements	56. Miscellaneous equipment
7. Elevated structures	6. Ties	40. Revenues and operating expenses during construction	57. Shop machinery
8. Ties	7. Rails	41. Cost of road purchased	58. Power plant machinery
9. Rails	8. Other track material	42. Reconstruction of road purchased	IV GENERAL EXPENDITURES
10. Other track material	9. Ballast	43. Other expenditures—Road	71. Organization expenses
11. Ballast	10. Track laying and surfacing	44. Shop machinery	72. General officers and clerks
12. Track laying and surfacing	11. Fences, snowsheds, crossings and signs	45. Power plant machinery	73. Engineering
13. Right of way fences	12. Station and office buildings	46. Power substation apparatus	74. Law
14. Snow and sand fences and snowsheds	13. Roadway buildings	47. Unapplied construction material and supplies	75. Stationery and printing
15. Crossings and signs	14. Fuel and water stations	II EQUIPMENT	76. Earnings during construction
16. Station and office buildings	15. Equipment shops	51. Steam locomotives	77. Taxes
17. Roadway buildings	16. Wharves	52. Other locomotives	78. Interest during construction
18. Water stations	17. Telegraph and telephone lines	53. Freight-train cars	79. Other expenditures—General
19. Fuel stations	18. Signals and interlockers	54. Passenger-train cars	V INVESTMENT SUSPENSE
20. Shops and enginehouses	19. Power plants	55. Motor equipment of cars	91. Unadjusted investments
21. Grain elevators	20. Power transmission systems	56. Floating equipment	92. Road purchased—Unadjusted
22. Storage warehouses	21. Miscellaneous structures	57. Work equipment	
23. Wharves and docks	22. Sand and gravel pits and quarries	58. Miscellaneous equipment	
24. Coal and ore wharves	23. Roadway machines and tools	III GENERAL EXPENDITURES	
25. Gas producing plants		71. Organization expenses	
26. Telegraph and telephone lines		72. General officers and clerks	
27. Signals and interlockers		73. Law	
28. Power dams, canals and pipe lines		74. Stationery and printing	
29. Power plant buildings		75. Taxes	
30. Power substation buildings		76. Interest during construction	
31. Power transmission systems		77. Other expenditures—General	
32. Power distribution systems			

It suggested also in case the primary accounts are retained a consolidation of the new accounts 3—"Grading," 6—"Ties," 7—"Rails," 8—"Other track material," 9—"Ballast" and 10—"Track laying and surfacing" into a single account "Roadway and track." It also suggested that a new account be established designated "Roadway shop and miscellaneous structures" to include the new accounts 13—"Roadway buildings," 15—"Equipment shops" and 21—"Miscellaneous structures" but did not give reasons in either case.

Its most important recommendation was one dealing with accounting for fixed improvements retired and not replaced, in connection with which it gave detailed reasons as follows:

*Accounting for Fixed Improvements Retired and Not Replaced.*—It is recommended that the loss in connection with the retirement of all transportation property be treated uniformly, and that, therefore, the loss on fixed improvements retired

and not replaced shall be absorbed in operating expenses. The committee gave the following as its reasons for this recommendation:

(a) To continue in business successfully a carrier must have at least earnings large enough to pay for its operation, maintain its property, and afford a return upon its invested capital.

(b) Maintaining its property means not only the keeping up of the physical condition, but a restoration of the property or capital that is consumed in operation.

(c) When property is consumed in operation the cost may be included in expenses, through the medium of direct charges or indirectly by depreciation charges.

(d) Whether or not a property is replaced is not controlling as against the necessity of protecting the carrier's investment. If it is consumed in operation it should be included in expenses, otherwise the cost of the revenue is understated.

(e) Under the conditions now prevailing—the existence of the recapture act and a different rate-making provision—bring out prominently these basic truths, for conceivably a company could be in the recapture class and lose a substantial part of its capital through the process of charging retired property to profit and loss, thereby overstating its real net income, part of which would be surrendered.

(f) In the absence of such a provision of the law, these charges were justified by their advocates on the ground that non-replacement virtually amounted to liquidation and as the carriers were not vitally affected the plan was not opposed. But sound accounting never authorized such charges except in the case of liquidation.

## Classification of Operating Expenses

The most important change in the classification of operating expenses is a reduction in the number of primary accounts from 209 to 125. The present eight general accounts remain unchanged except that the account III—"Traffic" is moved to VI. The reduction in the number of primary accounts is principally in the two maintenance accounts. Thus the number of primary accounts under I—"Maintenance of way and structures" is reduced from 79 to only 33, and those under II—"Maintenance of Equipment" from 37 to 19. The

primary accounts under "Transportation" are reduced by only 2. The reason for the great decrease in the number of maintenance accounts is due to the consolidation of all of the depreciation accounts into one in each primary account which is also true of the retirements accounts. There will also be noted such features under "Maintenance of way and structures" as the more inclusive accounts, 209—"Fences, snowsheds, crossings and signs" and 212—"Fuel and water stations." Similarly under "Maintenance of Equipment" there will be



noted the consolidation of accounts 308—"Steam locomotives—Repairs" and 311—"Other locomotives—Repairs" into the new account 304—"Locomotives—Repairs" or of 317—"Passenger-train cars—Repairs" and 320—"Motor equipment of cars—Repairs" into the new account, 306—"Passenger-train cars—Repairs." It will also be noted that the new account 202—"Roadway and Track," primarily a labor account, is a combination of present accounts 202—"Roadway maintenance" and 220—"Track laying and surfacing." One will also notice that the first primary account in each general account has become "Supervision" in place of "Superintendence."

An interesting feature is the inclusion of the two new primary accounts 233—"Amortization—Way and structures" and 319—"Amortization—Equipment." The text of account 233 reads as follows:

**233. Amortization—Way and Structures.**

This account is to be used only by carriers having an expectation of traffic justifying the continuance of operation of its entire railroad, or branch thereof, for only a limited period.

This account shall include the estimated monthly charges representing the proportionate part of service value in fixed improvements which it is estimated will be unexpired when the operations of the carrier are discontinued. Unexpired service value is the ledger value of the property, less the accrued depreciation and the value of the salvage, as of the date on which it is estimated that the operations will be discontinued. The proportion chargeable in each month's account shall be reckoned upon the relation of one month's period to the total life of the fixed improvements from date of their acquisition, to the date on which it is anticipated the operations will be discontinued. The amounts charged to this account shall be credited to account 779, "Other unadjusted credits."

When the carrier desires authority to use this account, it shall submit a statement to the commission containing the following information:

1. The estimated date on which the operation of the railroad or branch will be discontinued, and all facts indicating the reasons for the abandonment.
2. The cost of the fixed improvements by primary accounts, showing for each such account as of the date of abandonment; (a) the estimated depreciation which will be accrued through operating ex-

penses; (b) the estimated value of the property on the date operations will have been discontinued; and (c) the loss to be provided for through charges to this account.

3. The recommendation of the carrier as to the rate upon which the monthly charges upon the property included in each primary account should be reckoned.

Only when authorized by the commission is the use of this account permitted.

### Suggestion for New General Account

The R. A. O. A. committee on general accounts has several recommendations to offer concerning the classification of operating expenses. A selection of its more important differences of opinion follows:

*General Account "Miscellaneous."*—The committee recommends that a general account under the caption "Miscellaneous" be provided to include primary accounts as follows:

- (a) Retirements
  - 1. Account 231—Fixed improvements—Retirements.
  - 2. Account 317—Equipment—Retirements.
- (b) Depreciation
  - 1. Account 230—Fixed improvements—Depreciation.
  - 2. Account 316—Equipment—Depreciation.

The recommendation made concerning items (a) and (b) if adopted will remove from general accounts I and II items commonly referred to as "bookkeeping" items, leaving in these general accounts cash expenditures only.

- (c) Valuation expenses—Account 467.
- (d) Insurance—Accounts 229, 315, 417, 434, 456, 471 (consolidated in one account).
- (e) Pensions and relief—Account 465.
  - 1. Injuries to persons—Accounts 224, 310 and 416;
  - 2. Loss and damaged freight—Account 414;
  - 3. Other damages—
- (f) Casualties
  - A consolidation of the following accounts:
  - 412 Damage to property;
  - 413 Damage to live stock on right of way;
  - 415 Loss and damage—Baggage.
- (g) Material Store Expenses—
  - 1. Material store expenses,
  - 2. Stationery store expenses.

## Present and New Operating Expense Classifications Compared

### I—Maintenance of Way and Structures

<i>Present Classification</i>	<i>Tentative Revision</i>	<i>Present Classification</i>	<i>Tentative Revision</i>
201 Superintendence	201 Supervision	231 Water stations	231 Fixed improvement—Retirements
202 Roadway maintenance	202 Roadway and track	232 Water stations—Depreciation	232 Equalization—Way and structures
203 Roadway—Depreciation	203 Tunnels	233 Fuel stations	233 Amortization—Way and structures
204 Underground power tubes	204 Bridges	234 Fuel stations—Depreciation	
205 Underground power tubes—Depreciation	205 Ties	235 Shops and enginehouses	
206 Tunnels and subways	206 Rails	236—Shops and enginehouses—Depreciation	
207 Tunnels and subways—Depreciation	207 Other track material	237 Grain elevators	
208 Bridges, trestles, culverts	208 Ballast	238 Grain elevators—Depreciation	
209 Bridges, trestles and culverts—Depreciation	209 Fences, snowsheds, crossings and signs	239 Storage warehouses	<i>Present Classification</i>
210 Elevated structures	210 Station and office buildings	240 Storage warehouses—Depreciation	259 Power distribution systems
211 Elevated structures—Depreciation	211 Roadway buildings	241 Wharves and docks	260 Power distribution systems—Depreciation
212 Ties	212 Fuel and water stations	242 Wharves and docks—Depreciation	261 Power line poles and fixtures
213 Ties—Depreciation	213 Equipment shops	243 Coal and ore wharves	262 Power line poles and fixtures—Depreciation
214 Rails	214 Wharves	244 Coal and ore wharves—Depreciation	263 Underground conduits
215 Rails—Depreciation	215 Telegraph and telephone lines	245 Gas producing plants	264 Underground conduits—Depreciation
216 Other track material	216 Signals and interlockers	246 Gas producing plants—Depreciation	265 Miscellaneous structures
217 Other track material—Depreciation	217 Power plants	247 Telegraph and telephone lines	266 Miscellaneous structures—Depreciation
218 Ballast	218 Power transmission systems	248 Telegraph and telephone lines—Depreciation	267 Paving
219 Ballast—Depreciation	219 Miscellaneous structures	249 Signals and interlockers	268 Paving—Depreciation
220 Track laying and surfacing	220 Roadway machines and tools	250 Signals and interlockers—Depreciation	269 Roadway machines
221 Right of way fences	221 Roadway supplies	251 Power plant dams, canals and pipe lines	270 Roadway machines—Depreciation
222 Right of way fences—Depreciation	222 Removing snow, ice and sand	252 Power plant dams, canals and pipe lines—Depreciation	271 Small tools and supplies
223 Snow and sand fences and snowsheds	223 Public improvements	253 Power plant buildings	272 Removing snow, ice and sand
224 Snow and sand fences and snowsheds—Depreciation	224 Injuries to persons	254 Power plant buildings—Depreciation	273 Assessments for public improvements
225 Crossings and signs	225 Stationery and printing	255 Power substation buildings	274 Injuries to persons
226 Crossings and signs—Depreciation	226 Other expenses	256 Power substation buildings—Depreciation	275 Insurance
227 Station and office buildings	227 Maintaining joint tracks, yards, and other facilities, Dr.	257 Power transmission systems	276 Stationery and printing
228 Station and office buildings—Depreciation	228 Maintaining joint tracks, yards and other facilities, Cr.	258 Power transmission systems—Depreciation	277 Other expenses
229 Roadway buildings	229 Insurance		278 Maintaining joint tracks, yards and other facilities—Dr.
230 Roadway buildings—Depreciation	230 Fixed improvements—Depreciation		279 Maintaining joint tracks, yards and other facilities—Cr.

## II—Maintenance of Equipment

<i>Present Classification</i>	<i>Tentative Revision</i>
301 Superintendence	301 Supervision
302 Shop machinery	302 Shop machinery
303 Shop machinery—Depreciation	303 Power plant machinery
304 Power plant machinery	304 Locomotives—Repairs
305 Power plant machinery—Depreciation	305 Freight cars—Repairs
306 Power substation apparatus	306 Passenger-train cars—Repairs
307 Power substation apparatus—Depreciation	307 Floating equipment—Repairs
308 Steam locomotives—Repairs	308 Work equipment—Repairs
309 Steam locomotives—Depreciation	309 Miscellaneous equipment—Repairs
310 Steam locomotives—Retirements	310 Injuries to persons
311 Other locomotives—Repairs	311 Stationery and printing
312 Other locomotives—Depreciation	312 Other expenses
313 Other locomotives—Retirements	313 Maintaining joint equipment—Dr.
314 Freight-train cars—Repairs	314 Maintaining joint equipment—Cr.
315 Freight-train cars—Depreciation	315 Insurance
316 Freight-train cars—Retirements	316 Equipment—Depreciation
317 Passenger-train cars—Repairs	317 Equipment—Retirements
318 Passenger-train cars—Depreciation	318 Equalization—Equipment
319 Passenger-train cars—Retirements	319 Amortization—Equipment
320 Motor equipment of cars—Repairs	
321 Motor equipment of cars—Depreciation	<i>Present Classification</i>
322 Motor equipment of cars—Retirements	328 Work equipment—Retirements
323 Floating equipment—Repairs	329 Miscellaneous equipment—Repairs
324 Floating equipment—Depreciation	330 Miscellaneous equipment—Depreciation
325 Floating equipment—Retirements	331 Miscellaneous equipment—Retirements
326 Work equipment—Repairs	332 Injuries to persons
327 Work equipment—Depreciation	333 Insurance
	334 Stationery and printing
	335 Other expenses
	336 Maintaining joint equipment at terminals—Dr.
	337 Maintaining joint equipment at terminals—Cr.

## III—Transportation—Rail Line

<i>Present Classification</i>	<i>Tentative Revision</i>
371 Superintendence	371 Supervision
372 Dispatching trains	372 Dispatching trains
373 Station employees	373 Station employees
374 Weighing, inspection and demurrage bureaus	374 Weighing, inspection and demurrage bureaus
375 Coal and ore wharves	375 Coal and ore wharves
376 Station supplies and expenses	376 Station supplies and expenses
377 Yardmasters and yard clerks	377 Yardmasters and yard clerks
378 Yard conductors and brakemen	378 Yard conductors and brakemen
379 Yard switch and signal tenders	379 Yard switch tenders
380 Yard enginemen	380 Yard enginemen
381 Yard motormen	381 Yard motormen
382 Fuel for yard locomotives	382 Fuel for yard locomotives
383 Yard switching power produced	383 Yard switching power produced
384 Yard switching power purchased	384 Yard switching power purchased
385 Water for yard locomotives	385 Water for yard locomotives
386 Lubricants for yard locomotives	386 Lubricants for yard locomotives
387 Other supplies for yard locomotives	387 Other supplies for yard locomotives
388 Enginehouse expenses—Yard	388 Enginehouse expenses—Yard
389 Yard supplies and expenses	389 Yard supplies and expenses
390 Operating joint yards and terminals—Dr.	390 Train enginemen
391 Operating joint yards and terminals—Cr.	391 Train motormen
392 Train enginemen	392 Fuel for train locomotives
393 Train motormen	393 Train power produced

## Transportation—Rail Line, Continued

<i>Present Classification</i>	<i>Tentative Revision</i>
394 Fuel for train locomotives	394 Train power purchased
395 Train power produced	395 Water for train locomotives
396 Train power purchased	396 Lubricants for train locomotives
397 Water for train locomotives	397 Other supplies for train locomotives
398 Lubricants for train locomotives	398 Enginehouse expenses—Train
399 Other supplies for train locomotives	399 Trainmen
400 Enginehouse expenses—Train	400 Train supplies and expenses
401 Trainmen	401 Operating sleeping cars
402 Train supplies and expenses	402 Signal and interlocker operation
403 Operating sleeping cars	403 Crossing protection
404 Signal and interlocker operation	404 Drawbridge operation
405 Crossing protection	405 Telegraph and telephone operation
406 Drawbridge operation	406 Water transfer operation
407 Telegraph and telephone operation	407 Stationery and printing
408 Operating floating equipment	408 Other expenses
409 Express service	409 Operating joint facilities—Dr.
410 Stationery and printing	410 Operating joint facilities—Cr.
411 Other expenses	411 Clearing wrecks
412 Operating joint tracks and facilities—Dr.	412 Damage to property
413 Operating joint tracks and facilities—Cr.	413 Damage to live stock on right of way
414 Insurance	414 Loss and damage—Freight
415 Clearing wrecks	415 Loss and damage—Baggage
416 Damage to property	416 Injuries to persons
417 Damage to live stock on right of way	417 Insurance
418 Loss and damage—Freight	418 Equalization—Transportation
419 Loss and damage—Baggage	
420 Injuries to persons	

## IV—Transportation—Water Line

<i>Present Classification</i>	<i>Tentative Revision</i>
431 Operation of vessels	431 Operation of vessels
432 Operation of terminals	432 Operation of terminals
433 Incidental	433 Incidental
	434 Insurance

## V—Miscellaneous Operations

<i>Present Classification</i>	<i>Tentative Revision</i>
441 Dining and buffet service	441 Dining and buffet service
442 Hotels and restaurants	442 Hotels and restaurants
443 Grain elevators	443 Other miscellaneous operations
444 Stockyards	
445 Producing power sold	
446 Other miscellaneous operations	

## VI—Traffic

<i>Present Classification</i>	<i>Tentative Revision</i>
351 Superintendence	451 Supervision
352 Outside agencies	452 Solicitation
353 Advertising	453 Development
354 Traffic associations	454 Stationery and printing
355 Fast freight lines	455 Other expenses
356 Industrial and immigration bureaus	456 Insurance
357 Insurance	457 Equalization—Traffic
358 Stationery and printing	
359 Other expenses	

## VII—General

<i>Present Classification</i>	<i>Tentative Revision</i>
451 Salaries and expenses of general offices	461 General officers
452 Salaries and expenses of clerks and attendants	462 General office clerks and attendants
453 General office supplies and expenses	463 General office supplies and expenses
454 Law expenses	464 Law expenses
455 Insurance	465 Pensions and relief
456 Relief department expenses	466 Stationery and printing
457 Pensions	467 Valuation expenses
458 Stationery and printing	468 Other expenses
459 Valuation expenses	469 General joint facilities—Dr.
460 Other expenses	470 General joint facilities—Cr.
461 General joint facilities—Dr.	471 Insurance
462 General joint facilities—Cr.	

## VIII—Transportation for Investment—Cr.



Expenditures incident to valuation, insurance and pensions and relief are not considered to be in the category of general expenses, and it is recommended they should be removed from that group. Casualties of the character described are customarily unavoidable and it is felt desirable to assemble such expenditures under the miscellaneous group.

### Suggested New Primary Accounts

*Establishing Primary Accounts for "Work Train," "Shop," "Material Stores" and "Stationery Store" Expenses.*—It is recommended that primary accounts be provided under the following captions:

Work train expenses  
Shop expenses  
Material store expenses  
Stationery store expenses

for the following reasons:

(a) *Work train expenses.*—In the present classification, issue of July 1, 1914, under general account I—Maintenance of way and structures, there is included in the several primary accounts provision for the inclusion of work train expenses. Similar provision has been made in the several primary accounts under this general account in the tentative classification of operating expense accounts, draft of September 10, 1926. The committee recommends the elimination of the provision for work train expenses in the several primary accounts of the proposed classification, and suggests a new primary account styled "Work train expenses" under this general account.

(b) *Shop, material stores, and stationery store expenses.*—In the instructions under general account II—Maintenance of equipment, in the present classification, issue of July 1, 1914, there are included provisions for the accumulation and disposition of expenses styled "Shop expenses," "Material stores expenses," and "Stationery store expenses." Similar instructions are retained in the tentative classification. The committee recommends that these instructions be eliminated, and that there be provided under general account II—Maintenance of equipment—a primary account styled "Shop expenses," to which shall be charged all items now detailed under instruction 215 of the tentative classification, and that the instructions 216, "Material stores expenses," and 217, "Stationery store expenses," be eliminated and included as a primary account styled "Material store expenses" under general account V—Miscellaneous operations.

The committee believes that the recommendations should be adopted for the following reasons:

(a) The necessity of allocating such charges to other primary accounts, and the complicated distribution incident thereto is eliminated.

(b) The expense incident to such allocation will be avoided, and there will be released clerical help for more important duties, enabling prompt completion of accounting reports.

(c) A total of the expenses is immediately available and officers directly responsible will be in possession of information not readily obtainable under the present classification.

(d) The practice of charging expenses supervised by one department to other departments having no supervision over such expenses will be eliminated.

*Consolidation of Primary Accounts.*—The committee recommends consolidation of accounts as follows:

(a) Account 373—Station employees.  
Account 374—Weighing, inspection, and demurrage bureaus.  
Account 375—Coal and ore wharves.  
Account 376—Station supplies and expenses.

These accounts should be consolidated to bring together labor, supplies and incidental expenses due to the operation of stations.

(b) Account 378—Yard conductors and brakemen.  
Account 379—Yard switch tenders.  
Account 380—Yard enginemen.  
Account 381—Yard motormen.

These accounts should be consolidated in order that all labor employed in transportation yards will be included in one account.

(c) Account 382—Fuel for yard locomotives.  
Account 383—Yard switching power produced.  
Account 384—Yard switching power purchased.

These accounts should be consolidated so that all elements of fuel and power for yard service will be included in one account.

(d) Account 385—Water for yard locomotives.  
Account 386—Lubricants for yard locomotives.  
Account 387—Other supplies for yard locomotives.  
Account 389—Yard supplies and expenses.

### Consolidation of Primary Accounts

The consolidation of these accounts will bring together in one account all supplies (except fuel) for yard locomotives and incidental yard operating expenses.

(e) Account 388—Enginehouse expenses—Yard.  
Account 398—Enginehouse expenses—Train.

Enginehouse expenses should be considered as a terminal operation and the two accounts consolidated. The separation now being made between yard and road is not on an accurate basis, cannot be definitely determined, and produces misleading results.

(f) Account 390—Train enginemen.  
Account 391—Train motormen.

These accounts should be consolidated so that all train enginemen will be included in one account.

(g) Account 392—Fuel for train locomotives.  
Account 393—Train power produced.  
Account 394—Train power purchased.

These accounts should be consolidated for the same reason as expressed in similar accounts in yard operation. (See item 20.)

(h) Account 395—Water for train locomotives.  
Account 396—Lubricants for train locomotives.  
Account 397—Other supplies for train locomotives.  
Account 400—Train supplies and expenses.

These accounts should be consolidated, in order that all supplies for trains (except locomotive fuel) will be included in one account.

(i) Account 403—Crossing protection.  
Account 404—Drawbridge operation.

These accounts should be consolidated.

(j) Account 412—Damage to property.  
Account 413—Damage to live stock on right of way.  
Account 415—Loss and damage—Baggage.

These accounts should be consolidated under the title "Other damages" for the reason that stock is "property" and the charges due to loss and damage—baggage are very small as reported in the annual report to the Interstate Commerce Commission.

## Classification of Operating Revenues

The changes in the classification of operating revenues have not been substantial. There is, however, a new primary account, 131—"Heating and refrigeration," the inclusion of which the accounting officers oppose for the following reasons:

(a) The tentative classification makes a distinction in accounting between "stated refrigeration" and miscellaneous icing charges—the first to be credited to the new revenue account 131—"Heating and refrigeration," the latter to operating expense account 400—"Train supplies and expenses," as heretofore.

(b) This presumably on the theory that stated refrigeration charges are covered by published tariff and include a profit, whereas miscellaneous icing is assumed to be done at cost.

(c) As a matter of fact, there is no profit in the stated refrigeration charge. It represents approximately the cost of the service and when all elements of cost are considered usually results in a loss.

(d) As by far the greater portion of the charge is directly allocatable to cash outlay for ice—possibly as much as 90 percent—it seems improper to charge the cost of the ice to operating expenses and credit the stated refrigeration charge to operating revenues. Moreover, the treatment proposed results in penalizing carriers operating in states where taxes are assessed on basis of gross operating revenues, in spite of the fact that there is no profit from this incidental service.

In the event the recommendation to eliminate this account is not accepted by the commission, it is the view of the committee that the rules should provide that the cost of ice furnished for stated refrigeration should be deducted from the credits to this account.

## Classification of Income Account

In the classification of the income account an interesting feature is a new form of income statement so arranged as to show net railway operating income and

therefore be more in keeping with the monthly report of revenues and expenses and the terms of the Transportation Act than is the present arrangement.

## Director Wylie Answers R. A. O. A. Criticisms

In his letter submitting the new classification to Chairman Eastman of the Interstate Commerce Commission, Director Alexander Wylie of the I. C. C. Bureau of Accounts has some interesting comment on the manner in which the work has been conducted. He also explains the changes made and gives reasons why some of the R. A. O. A. recommendations quoted above were not accepted. In addition, his letter covers certain features not brought out above. His letter follows:

I hand you herewith, as a progress report, revised accounting rules as prepared in tentative form for steam railroads.

In pursuance of the established practice in the formulation of accounting rules, tentative revisions were first prepared by this bureau and submitted to a committee assigned by the Railway Accounting Officers Association to co-operate with representatives of the commission by offering criticisms and recommendations as an aid in producing rules which, while meeting the needs of the commission and others who use the carriers' returns, would also provide suitable records for the carriers' financial, administrative, and operating purposes. This committee devoted much time and labor to the consideration of this matter. The rules were redrafted to incorporate in them such suggestions of the committee as, in the judgment of the representatives of the Bureau of Statistics, the Bureau of Valuation, and the Bureau of Accounts, seemed to be appropriate. The committee then rendered a report to the general accounts committee of the Railway Accounting Officers Association indicating the recommendations which had been offered but not tentatively accepted, and submitted copies of the revised drafts of the rules.

The general accounts committee considered the subjects, for the most part approving the suggestions previously offered, and submitted further recommendations. The drafts that are now presented to you were then prepared. Upon pages 3 to 9 are shown 68 recommendations of the general accounts committee, which are now being held for further consideration. A number of this committee's recommendations have been incorporated in these drafts. Of the recommendations which have not been tentatively accepted, 47 relate to modifications of the effective accounting rules.

In each of the classifications the instructions have been amplified and consecutive numbers assigned to them for convenience of reference. The texts of the accounts have also been expanded to include important items which have been brought to the attention of the Bureau of Accounts since the issuance of the effective accounting rules.

The report of railway accounting officers, upon the subject of assigning operating revenues and expenses to states, is contained on pages 11 to 13 of this publication. In the preparation of the tentative rules, this subject has been given very careful consideration. It is my view that any showing of revenues and expenses by states, if of value, must be produced by the assignment of the details entering into the primary accounts and not by the assignment of the total amounts includable in these accounts by the individual carriers. In other words, the results are obtainable by assigning items of revenues and expenses rather than by prorating the total charges to each primary account.

Our experience has been that the assignment of expenses to determine the cost of transporting any specific class of business must be through special studies. Any attempt to show in the financial accounts of carriers currently the expenses of all classes and kinds of business carried could only be effected through imposing upon the carriers enormous burdens of expense in accounting. Care has been exercised in preparing these rules, however, to preserve the primary accounts in such form that they are equally available for cost studies as are the effective rules.

The following will indicate the more important changes which have been made in the tentative drafts as compared with the effective rules:

### Road and Equipment

The total number of primary accounts has been reduced from 62 to 42. This has been accomplished by eliminating 22 accounts through consolidation of accounts carrying relatively small items of investment and by the addition of two accounts, one for sand and gravel pits and quarries, and one for unadjusted investment items.

A general account has been provided for land.

Investment in shop and power-plant machinery has been included under the general account "Equipment." This was done for the purpose of classifying the investment in and the main-

tenance of the property under the corresponding general accounts.

A new general account, "Investment suspense," is provided in which to carry items held in suspense until the necessary information is obtained to assign them to the other accounts. This suspense account will permit, should it be found desirable, adjusting of primary accounts to include the carriers' investment in railway property in accordance with the basic inventory valuation cost-new, the difference between the allowance thus distributed and the total investment to be carried in the "Unadjusted investment" account until the final disposition of this difference is authorized by the commission.

In the commission's valuation, the direct costs of structures were first determined, and to these costs there were added, on a percentage basis, the overhead costs to cover expenditures such as those provided for in the proposed general expenditures group. This was necessary for the reason that in the accounting by most carriers a part of the overhead expenses had been directly included in the cost of structures, while other items of the same character had been included under general expenditures. It is the view of the Bureau of Valuation that, because of the impracticability of assigning all general expenditures to the individual units of property, such expenditures should be carried in the general account and distributed pro rata in determining the ledger value of any particular piece of property. (The railway accounting committee recommends that all these expenditures be assigned to the primary accounts to which the direct costs of the structures are charged.)

The following are some of the more important recommendations of the railway accounting committee with respect to this classification, which have not been tentatively accepted:

Service value of fixed improvements retired and not replaced should be charged to operating expenses. (Such losses heretofore have been chargeable to profit and loss.)

The discontinuation of the charges for transportation of construction material over the carrier's own line. (Various carriers are insistent upon the allowances for such expenses in connection with valuation. The valuation and the accounting departments of the railroads therefore do not seem to be in accord on the subject.)

### Operating Revenues

It is provided that the carriers shall file with the commission their plans of accruing unaudited revenues and shall make no change in practice thereafter without filing the supplementary plans with the Commission. This and similar provisions in other classifications have been inserted for the purpose of keeping the Commission informed as to the practices of carriers in such matters, and it will permit the correction of improper practices. (The railway accounting committee objects to these rules for the reason that they restrict initiative and experiments).

An account has been provided for the revenue from heating and refrigerating service. The amount of this revenue, since the present classifications were promulgated, has very greatly increased and is of sufficient volume to justify a special revenue account therefor. (The accounting committee recommends the elimination of this account.)

### Operating Expenses

The number of accounts has been reduced from 209 to 125. This has been accomplished by the elimination of 90 accounts through consolidation of those carrying minor charges and the addition of 6 accounts to provide for equalization and amortization expenses.

The accounting committee recommended the consolidation of additional accounts. It is questionable whether these consolidations would result in releasing any considerable amount of labor for other work of the carriers. The thing to be determined is whether these accounts should be continued in the accounting rules in view of the fact that a large number of carriers will desire to maintain them.

The committee recommends that clearing accounts be eliminated for shop expenses and store expenses, and that primary accounts be set up for shop expenses, store expenses, and work train services. The acceptance of this recommendation would relieve the carriers of considerable labor. It would, however, render more difficult the determination of costs through special studies.

A single account for depreciation and a single account for the retirements of property are provided under each general account, "Maintenance of way and structures," and "Maintenance of equipment," but the assignment of such charges to the various classes of property should be maintained and shown in the annual reports or in special reports to the commission as required.

The insurance account provides that the amounts recovered from insurance companies on account of losses shall be credited to the account to which the premiums covering the hazards have



been charged. This rule would secure a showing for each and all carriers of the net amount charged against the revenues contributed by the public for insuring the carriers against hazards. It would also permit comparisons with respect to direct costs of maintenance, and expenses on account of personal injuries, loss and damage and similar claims, between the carriers that insure and those that do not insure, inasmuch as under the plan the total amount of such expenses will be stated in the appropriate accounts.

The primary account for valuation expenses is limited to the expenses incident to the ascertainment of the value of the carriers' property. This will require the current expenses of maintaining the carriers' records of property changes to be stated in appropriate primary accounts under general account "General."

The accounting committee recommended the creation of an additional general account under the title "Miscellaneous" (Item 27, page 5, of this publication), for the purpose of recording items which are now included under other general accounts.

### Income

These rules provide that all rents shall be excluded from the operating accounts and included in the rent accounts in income.

The income statement has been modified to include an account for "Net railway operating income."

Balancing accounts have been provided for hire of equipment, and contributions to cover the profit and loss in operation of separately operated properties. This will permit the showing of the net results in the accounts relating to such items.

The carriers recommend that the "Cost of advertising bonds drawn for redemption," "Cost of trusts, current expenses of maintaining and administering," and "Losses due to conversion of funds of a foreign country into U. S. funds," shall be included as operating expenses. These items heretofore have been shown in the income statement below the "Net railway operating income."

### Profit and Loss

The accounting committee recommends that the account, "Donations," shall be modified to include grants received from states, municipalities and other public corporations toward the construction or acquisition of carrier property, and that the account, "Grants in aid of construction," shall be eliminated.

The tentative rules provide that penalties and fines for violation of the interstate commerce act or other federal laws shall be included in profit and loss. The accounting committee recommends that all such items should be included in operating expenses.

### Balance Sheet

In instruction 703 (c) it is provided that verification shall be made currently of all suspense and open accounts. This rule is followed by most carriers. The provision is included for the purpose of putting all carriers on notice that this practice is mandatory. (The accounting committee recommends the elimination of this provision, but does not indicate the reason therefor.)

Provision has been made for carrying in the balance-sheet accounts for investment, the ledger value of railroads that are leased under such terms and conditions and for such duration as effectively to vest in the lessee ownership of the property. This provision is proposed in order that the returns of the carriers to the commission may include the ledger value of property owned by inactive non-operating companies as well as all other carrier property.

The accounting committee recommends that expenses in connection with the issuance and sale of evidence of funded debt, such as fees for drafting mortgages and trust deeds, cost of engraving and printing bonds, certificates of indebtedness and other registration papers, fees paid to trustees provided for in mortgages and trust deeds, fees paid for legal services to trustees relative to mortgage securities, fees and commissions paid to underwriters and brokers for marketing such evidence of debt, specific cost of obtaining government authority to issue funded debt, and other like expenses, be included under operating expenses. These items are now classed as an expense of funded debt and included in income.

The text of the account for "Cash" provides that the carrier shall show the entire amount of cash on hand without deduction for checks, vouchers, etc., outstanding against this balance. This is for the purpose of securing uniform accounting for items included in this account.

The accounting committee recommends that accounts, "Additions to property through income and surplus," and "Funded debt retired through income and surplus," shall be eliminated. These accounts were provided for the convenience of carriers in showing invested surplus distinctly from other profit and loss balances. The labor involved to maintain the accounts is small and it is questionable that they should be eliminated.

## Missouri Pacific Operates Agricultural Trains

A DAIRY show in a tent was one of the outstanding features of a special dairy train which the Missouri Pacific recently operated in southeast Missouri. Besides this train a soil improvement train was operated in southeastern Kansas and a better health and agricultural train in Louisiana.

At each of the points visited by the special dairy train, two large tents were erected, one for exhibits and the other, with a capacity for seating 500 people, was used for lectures. These tents were lighted by an electric light plant, which was included in the paraphernalia of the special train. The exhibits were made up of 30 head of specially selected purebred dairy cattle, representing the three breeds—Jersey, Holstein and Guernsey. Among these were four cows with butter fat records of over 800 lb., which it was found was equivalent to as much butter as 40 average cows now produced in southeast Missouri. John V. Nevitt, dairy development agent of the Missouri Pacific, in his lectures, gave the farmers practical suggestions on the breeding of dairy stock and the prevention and treatment of the most common cattle diseases. He also discussed the feeding



Dairy Show Held in Tents

of balanced rations in order to secure increased milk production. Other lectures were given by representatives of the State Board of Agriculture and various agencies interested in the development of dairy farming.

In addition to the cattle on exhibition, various types of dairy appliances and equipment were on display and a number of these exhibits were given away on the last day of the show to farmers holding lucky numbers selected by chance from the registration book. The entire equipment of the show was transported from one town to another in three baggage cars.

Among those co-operating with the agricultural development department of the Missouri Pacific were the dairy department of the Missouri State Board of Agriculture and the Southeast Missouri Drummers' Association. The train visited 13 counties and stops were made at 13 towns. Altogether about 53,000 people were in attendance.

The soil improvement train was operated in conjunction with the Kansas State Agricultural College when it was found that the fertility of the soil in southeastern Kansas had deteriorated to a marked degree during the last 25 years. The average corn and wheat yield is not more than one-half what it was when the soil was first brought into cultivation. Previous work of the soil division of the Kansas State Agricultural College showed that 90 per cent of the upland soils in that section of the state need the addition of agricultural limestone before leguminous soil-building crops can be

grown profitably. A plan was worked out with the college for the running of a soil-building train consisting of two exhibit cars, another car containing a completely equipped soil testing laboratory, a lecture car, a dining car and a Pullman car.

In the soil testing laboratory, soils were tested for acidity only. Farmers were invited to bring soil samples to be tested and were given a printed slip, bearing a prescription for the amount of agricultural limestone necessary to correct the acidity, where the soil required such treatment. Over 1,200 samples of soil were tested on the train, and of this number 760 gave an acid reaction, showing the need of agricultural limestone. The Kansas State Agricultural College furnished a corps of



Soil Improvement Train Visited by 32,000 People

lecturers who talked on agricultural limestone, the preparation of the seed bed, legumes as soil builders, and diseases and insects affecting leguminous crops. In addition, the agricultural development department of the railroad furnished two agricultural speakers. A radio loud speaker enabled the crowds to hear each lecture.

The train visited 28 towns in southeastern Kansas, making the trip in nine days. During this time, the total attendance reached 32,000.

Better health for Louisiana citizens and better health for the soil that supports them, were the objects sought as a result of the operation of the Better Health and Agricultural Special by the sanitary department, the hospital association and agricultural development department in the state of Louisiana. Co-operating with the railroad were the United States Public Health Service, the Louisiana Conservation Department, the Louisiana State University, the Louisiana State Board of Health, the Louisiana State Department of Agriculture and Immigration, the Gorgas Memorial Institute, the Louisiana Development Association, the Louisiana Bankers' Association and the local civic organizations in the towns visited.

The train consisted of seven cars, two exhibit cars, two lecture cars, a baggage car, a Pullman car and a dining car. The health car carried exhibits presenting the dangers of malaria and typhoid fever and showing how these diseases grow and spread and how they can be controlled and eventually eliminated. The agricultural car contained material illustrating the value of legumes in soil building and giving information on reforestation and forest fire prevention. Lectures were held on health and sanitation, and on improved agricultural practices, by speakers well informed on these subjects.

During the first week the train drew an attendance of 6,800 white and 1,700 colored visitors, and for the 14 days the attendance totaled 21,943, while the number of towns visited was 62.

## Newark Bay Bridge Formally Opened

ON Saturday, November 27, the Central Railroad of New Jersey dedicated and formally opened its new four-track bridge over Newark Bay connecting Bayonne, N. J., with Elizabethport. This new bridge cost in the neighborhood of \$14,000,000 and consists essentially of two parallel double-track bridges, 7,411 ft. long, each of which embraces two through truss lift spans for the passage of shipping, and an approach structure at each end consisting of long span deck girders and typical viaduct construction. The bridge, which was put in full service on Sunday morning, November 28, is one of the longest four-track bridges in the country and has the largest draw bridge assembly in the world. The new structure replaces a two-track pile trestle which was originally built in 1863-1865. Descriptions of this project and of the details of its construction were published in the January 16 and March 13, 1926, issues of the *Railway Age*.

The dedication was marked by a suitable celebration which included a special train over the bridge carrying 254 guests and officers of the railroad. The guests included federal, state and city officials, prominent business men, officers of other roads and twenty commuters who have been using the service of the Central Railroad of New Jersey for 50 years or more. The crew of the special train was made up of enginemen and trainmen who have served the company from 44 to 52 years consecutively.

After a short stop on the bridge, at which time William G. Besler, chairman of the board of directors, formally dedicated the bridge to the service of the people of New Jersey, the special train proceeded to Newark where the party was entertained at a luncheon at the Hotel Robert Treat. The speakers at the luncheon included Governor A. Harry Moore of New Jersey, and the following officers of C.R.R. of N.J.: William G. Besler, chairman of the board; Albert H. Harris, senior member of the board and vice-president of the New York Central; Charles H. Stein, assistant to the president and Arthur E. Owen, chief engineer. Roy B. White, president of the railroad, acted as toastmaster.



On the Big Four in Indiana



# The Public and the Railroads

*The representative of the public has his problem—Legislation difficult—Section 15-a unpopular*

**E**MPHASIZING the difficulty encountered by the legislator as threefold, that of having to recognize the interest of the management of the railroads, of the employees and of the larger party, the public, Simeon D. Fess, United States Senator from Ohio, spoke on transportation from the point of view of the public's representative at the annual dinner of the Railway Business Association at the Hotel Commodore, New York, November 18. An abstract of his address follows:

The legislator must recognize the interest of the management, also the interest of the owners, also the interest of the employees, but in addition to all that he must recognize the interest of the larger party, which is the public.

I know about the effort to repeal the surcharge. I understand the ground upon which it is put. I respect those who are making the effort. But I have never agreed with them. Until we can find some other revenue to take the surplus of the \$40,000,000, I do not see how the charge can be repealed, and for that reason I have continued to oppose it.

I respect the people who insist upon regionalizing the Interstate Commerce Commission, on making it a body representative of the various localities of the country. Some men in the Senate insist that the Interstate Commerce Commission must represent the various sections of the country, and would pass a law, requiring the President, when he makes the appointments, to take them from specific sections. While I respect the judgment of these men, I think one of the most fatal things we could do would be to plunge the Interstate Commerce Commission into something like a pork barrel; and I therefore insist that the Interstate Commerce Commission must be a national body, in which its interests are for the public at large, rather than for any particular section.

## Long-and-Short Haul Clause

There has been a tremendous agitation to deny to the Interstate Commerce Commission its power over Section 4, the long-and-short-haul clause. I am perfectly familiar with the argument, and it seems to me that on the face of it, there should not be a smaller charge for a long haul than a short haul, but if that is to be prevented, it should not be by the order of Congress. It should be by the order of the Interstate Commerce Commission, where it belongs.

The question that is before us now in the form of a simple resolution is a declaration that agriculture is a staple article or a staple industry. Of course it is, without saying so. Saying so by legislation does not make it more so than it is. The reason that resolution was passed was to get relief for agriculture. I recognize the tremendous basic importance of agriculture. The basic occupations in America are agriculture, transportation, mining and manufacturing, banking, in various forms, managerial ability in directing industry, and labor. What a wonderful position America has, when we analyze the strength of the country from those elements. There is no such thing as general prosperity if any one of these basic industries is depressed. To have the general prosperity for which all of us are working there must not be any one of these under the handicap of depression if

we can relieve it. Therefore, agriculture commands our attention, and ought to, in a sympathetic way.

Some of the agitators hold that the way to relieve it is the reduction of the freight rates on agricultural products. I have some sympathy with that point of view, provided that the necessary revenue of the roads can be supplied without detriment to other industries. I am of the opinion that the rate structure can be revised.

## Can Reduce Rates

I think that there is no difficulty in reducing freight rates upon certain articles, if we can add the freight rate to other articles in which there is much value in little space. It has been suggested that that would be benefitting one industry at the expense of another, but I do not believe a revision of the rates on things like silks and the like would increase to the detriment of the purchaser the price of the article. We might reduce the freight rate upon agriculture and increase the freight rate upon other articles without hurt to the public or to the railroads. But the only way it could be done would be under a system where the reduction from one road, which might be altogether agricultural, might be made up by the increase on another road, where the road itself does not need the increase, and that would have to come through a revision of the rate structure. But, nobody here would believe that I think that the revision should be made by Congress.

A demand is made for the lowering of freight rates on agriculture as a remedy or relief for this depression. On the whole this could not have a great effect; but that does not change the psychology of the situation. Where a demand is being made in a democracy like ours, a problem cannot be suppressed; it must be directed. And I say to the men interested in transportation here, that the problem of transportation in products of the farm is one that has got to be met. If it can come through a revision of the rate structure, and that revision be made by the experts of the government, in consultation with railroad men, then it may be safe, but it must not be done by the politician at Washington.

## No Guarantee Made

Everywhere it is stated that we have guaranteed an income to the railroads. To me it is a surprising thing that in the face of the fact that there was only a guarantee for a short space of time, following the return of the railroads to the owners, we hear in Congress every day from responsible senators that we guarantee a profit to the railroads, therefore you must guarantee it to the farmer, or you are discriminating against the farmer.

It was that kind of an argument that led me to suggest to some of the railway representatives that it might be wise for us to repeal the 15a provision, because in 15a there isn't a thing, outside of the announcement of a policy, and that is that there should be reasonable income upon the valuation of the property. There is another thing in 15a that most people do not want,—the recapture clause, and that is the only thing in the section which the Interstate Commerce Commission could not do without it. The only thing 15a says about income is that it is the policy of the government to permit a reasonable income or return upon the valuation of the property.

It says nothing about what income would be reasonable. That is left wholly to the Commission, and that commission could do that thing without 15a if it wanted to.

### Dangers of Repeal

The railway managers point out, however, that if we would repeal that, it might be a repeal of the policy that a reasonable return on the investment should be permitted.

There is a phase of legislation which in my opinion ought to command your sympathetic attention. You may believe that because of the unfortunate experience during the World War with government ownership we shall never again be faced with the danger of government ownership. Better disabuse your mind of that idea. It is not entirely eradicated from the minds of the American people. There is a feeling, not among the responsible citizens, but pretty widespread, that if we had government ownership, and there were any profit, the government would get it, and if there wasn't any profit, then the government could stand the loss. So far as I am concerned, I am through with government ownership for the balance of my life. We had experience enough during the War. The demand for it will never have any effect on me.

Transportation is absolutely essential to maintain our present industrial and social life. You can do without some things, but not transportation. The country would starve, the country would freeze, if transportation should stop. Transportation must go on. It will go on. It does not make any difference how much loss will be suffered, it will go on, and if private enterprise cannot do it profitably and without interruption, the Government will do it. If it ever comes to the point where, from any reason, private ownership cannot continue the running of any essential line because it is paying out more than it is taking in, that line will run anyway, even if it has to be run by the government.

The basis on which government ownership is going to be demanded is the weak lines. There is before us now the proposal to permit rail properties to consolidate, so that the strong line may have attached to it a weaker line. The weaker line will be a feeder of the strong line, and the weaker line attached to the strong line might be more profitable than when it is independent. That is easily conceivable. I presume that is possible. There is a bill on the Senate calendar to permit the railroads to consolidate under a limited number of systems. The only feature of that bill is that it gives two years for the roads to make the consolidation, and if they do not do it within that time, then the government is to step in with a penalty to advance it or to expedite it. That is the feature I do not like.

I am of the opinion that railway consolidation would be advantageous, if it can be done under natural evolution, but not by Congress. Another bill will eliminate the compulsory feature, and I think we shall have some chance—not in the short session, but ultimately—of seeing it become a law. Though railway people do not like it generally, I am of the opinion that it is a better substitute than government ownership, which I am afraid of, unless something of this sort is carried out.

**BEES, SHRUBBERY AND RAILROADS.** A new use for land on the rights-of-way of railroads and on property adjacent to public highways, has been proposed by Dr. L. H. Pammel, chairman of the Iowa Board of Conservation, who suggests that this land be planted with wild flowers native to the states and be used as pasturage for bees. His plan also includes the planting of wild plum, red haw, Washington thorn, choke cherry and elderberry bushes. Among the railroad companies supporting the plan are the Chicago & North Western and the Wabash.

## Southern Pacific Ticket Offices

**I**N the designing of a passenger station the size of the office is the first thing to be taken into account, for the agent and clerks must do business and breathe in the building all day, whereas the passengers remain in the waiting rooms a comparatively short time. This salutary principle is copied from "The Elements of Rail

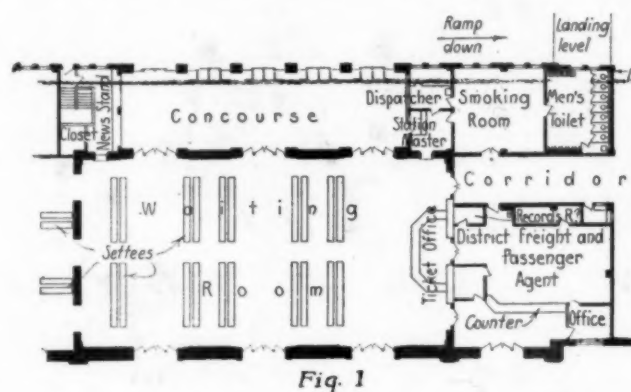


Fig. 1—Main Waiting Room, Sacramento Station

roading," a classical work written 40 years ago by Charles Paine, a noted railroad officer of that time. Mr. Paine's heart was as big as his head and his interest in the health and comfort of employees could not have been surpassed by a regiment of twentieth century welfare specialists. What he wrote in regard to the health and comfort of station agents and clerks is recalled by the improved con-



Fig. 2—Sacramento Waiting Room, Looking East

ditions to be seen today in certain passenger stations of the Southern Pacific, wherein the ticket sellers do their work in the main waiting room, being separated from the public no more than would be the case in the office of a hotel or in a city ticket office. One of these stations is the new one at Sacramento, Cal., which was described in the *Railway Age* of August 14.

The size and arrangement of the floor space allotted to the ticket sellers at Sacramento, and the proportion of



this space to that of the whole waiting room (which is 56 ft. by 114 ft.), will be understood from the diagram shown in Fig. 1. Fig. 2 is a perspective view taken in the same room. Ticket counters arranged on the same general plan are to be found in the large station at Los Angeles, Cal., at Santa Barbara, Cal., where the building is much smaller, and at a number of other places.

At a station where but one or two clerks are employed

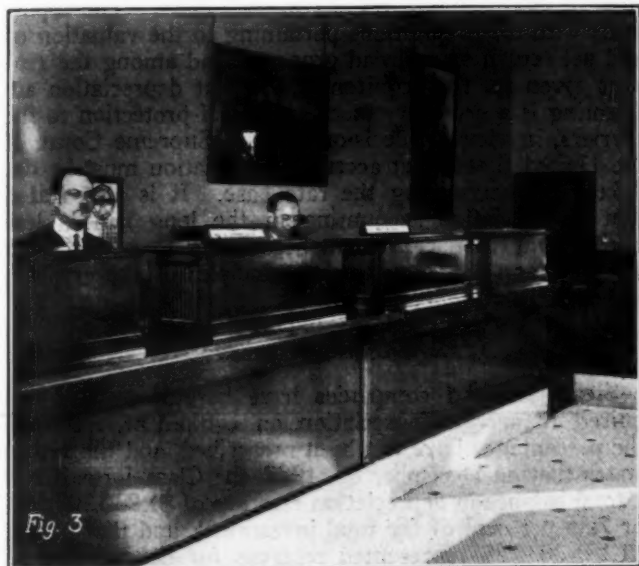


Fig. 3—Arrangement of Counter at a Small Office

and where, during considerable periods of time, between trains, it is not necessary for a salesman to be on duty, the desks and the enclosures containing the tickets are arranged so that a clerk desiring to vacate the office can lock up everything with a single lock. The money and the ticket stamps are placed in the safe. At these "open"



Fig. 4—Station at Reno, Nevada

ticket offices a room is made available in which the ticket agent can have suitable accommodations and the necessary quiet, to make up his accounts.

The freedom from the confinement of a small or poorly lighted office, probable lack of ventilation or suitable heat is not, however, the whole of the benefit which has been developed on the Southern Pacific. The offi-

cers of the road, reviewing their studies directed to the perfecting of the most efficient arrangements for ticket selling, look upon the "double deck" counter as an outstanding feature. The adoption of this design, as here described, has produced a very satisfactory simplification and improvement in conditions, not only in stations like those mentioned but in large city offices as well; and in smaller offices. The double deck counter is an ordinary counter 3 ft. 6 in. high and 2 ft. 4 in. wide surmounted by a second deck or top, 13½ in. high and 15 in. wide. This arrangement affords ample space on the salesman's side of the lower counter and a 3-in. space on the customer's side; and the top sections are separated one from another, so as to form wickets, about 4 ft. apart, center to center, with openings 20 in. wide. It is through these openings that the clerk deals with passengers.

With this arrangement there is no longer any complaint that patrons cannot be waited upon in order of their arrival. Where there is a long counter, with the space unbroken, it is almost inevitable that in case of heavy traffic many passengers will go away dissatisfied with the service received. With the clerks separated one from an-

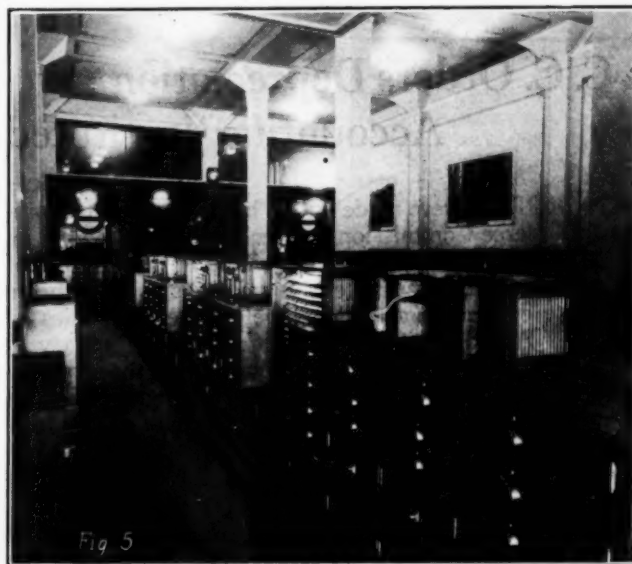


Fig. 5—Inner Side of Counter in a Large Office  
Office at 65 Geary Street, San Francisco

other there is no trouble because of a ticket seller being interrupted by annoying questions from persons other than the one on whom he is waiting.

That the atmosphere of personal attention, always to be desired in a modern ticket office, is much more easily attained in an office of this kind than where a high partition stands between the parties, goes without saying. Southern Pacific officers say also that the effect upon office morale has improved. The salesmen, under former conditions, subconsciously felt themselves shut off from the public, like prisoners barred from the rest of the world.

The lower counter cabinet contains a money drawer for each salesman together with long shallow drawers in which the coupon ticket stock is arranged. In the "upper deck" there are compartments containing telephones, ticket daters, inkwells, rubber stamps, writing pads and all other articles required by the clerks.

The double-deck counter is readily adaptable to the different dimensions imposed by shape and size of different stations or rooms. In large rooms it takes the outline of an oval or horseshoe and in smaller quarters is usually a cross counter or a longitudinal one in the shape of an "L."

In any of these arrangements maximum light and ventilation are easily assured for both patrons and office force, and the office has an inviting appearance. The patrons line up automatically before the several wickets, satisfied that they will receive attention promptly and in the order of their arrival. The customer gets the undivided service of the salesman, and persons waiting in line are able to see the entire office space, observing that every effort is being made by the office force to attend to the needs of all without unnecessary delays.

As all the paraphernalia for making out tickets, securing reservations, and giving information is neatly arranged and hidden from view behind the "upper deck" the salesman does not have to turn his back upon the customer. The entire ticket stock is within reach from each ticket seller's "station" and the loss of time and effort which are necessary with the old style upright ticket case, located four or five feet back of the counter, is done away with.

The third illustration is that of the city office in a small city. Only two clerks being on duty, the third wicket is closed.

## I. C. C. Orders Depreciation Accounting Instituted

WASHINGTON, D. C.

**O**RDERS were made public by the Interstate Commerce Commission on December 1, following an extensive investigation of the entire subject of depreciation, requiring all steam railroads subject to the interstate commerce act and all telephone companies of Class A, B and C to institute, effective on January 1, 1928, a system of depreciation accounting on the straight-line basis, covering, in the case of the railroads, 44 classes of common-carrier property, and in the case of the telephone companies 26 classes of fixed capital. The 44 classes of railroad property include 36 road accounts and 8 equipment accounts.

Percentage rates of depreciation are not prescribed in the order but each railroad is required to file with the commission by September 1, 1927, estimates of the composite percentage rates applicable to the ledger values of the respective primary accounts, accompanied by a sworn statement showing the bases therefor and the methods employed in their computation, and following an office check of such data the composite percentage rate of depreciation which shall be charged with respect to each such primary account will be prescribed for each company by temporary order of the commission, subject to subsequent modification from time to time in accordance with the procedure set forth in the commission's report.

Another requirement of the order is that the railroads estimate in accordance with the principles set forth, the amount of past accrued depreciation as of January 1, 1928, and credit to the depreciation reserve such portion as has not previously been so accounted for, debiting a corresponding amount to a suspense account on the assets side of the balance sheet for clearance later.

Each railroad is also required to include in its annual report to the commission a concise statement by primary accounts of the extent, if any, to which ordinary maintenance of its property has been neglected or deferred during the year.

With the orders the commission made public a report of some 100 pages by Chairman Eastman discussing and giving the commission's findings on many points on

which he says a wide and striking difference of opinion was developed at the hearing, involving a basic question partly of fact and partly of theory. Extensive hearings were held by the commission on the subject, pursuant to the provision in the transportation act which required the commission to prescribe the classes of property for which depreciation charges may properly be included under operating expenses and the percentages which shall be charged with respect to each class. The report deals with many questions pertaining to the valuation of and net return on railroad property, and among the reasons given for the requirements is that depreciation accounting is a necessary measure of self-protection to the carriers, in view of decisions of the Supreme Court of the United States that accrued depreciation must be deducted in determining the rate base. It is also stated that "depreciation accounting in the long run is less burdensome than retirement accounting to patrons and investors and conforms to the principles of conservative and constructive finance."

### Depreciation Reserves

Steam railroad companies have heretofore been required to accrue depreciation on equipment, although the percentages have not been prescribed, and the report states that on December 31, 1922, the Class I roads had a total balance in depreciation reserves of \$1,230,207,559, or 7.56 per cent of the total investment, and that of this \$1,181,383,728 represented reserves for depreciation of equipment and the balance represented reserves for depreciation of fixed property.

At the hearings the railroad, gas and electric light companies had taken the position that a railroad or public utility property is a composite of many separate units and should be so considered with respect to depreciation; that there is not depreciation in the composite property so long as it is well maintained; and that the retirements of most units of a large composite property tend ultimately to equalize. The railroads also contended that the commission has no power under the law to require them to set up depreciation charges but that the authority conferred was to prescribe the classes of property and the rates of depreciation to be used by the carriers in the event they elect to set up depreciation accounts.

The classes of property for which depreciation accounting is required by the order are as follows:

<b>Road:</b>	Signals and interlockers.
Underground power tubes.	Power dams, canals and pipe lines.
Tunnels and subways.	Power plant buildings.
Bridges, trestles and culverts.	Power substation buildings.
Elevated structures.	Power transmission systems.
Ties.	Power distribution systems.
Rails.	Power line poles and fixtures.
Other track material.	Underground conduits.
Ballast.	Miscellaneous structures.
Right-of-way fences.	Paving.
Snow and sand fences and snow-sheds.	Roadway machines.
Crossings and signs.	Shop machinery.
Station and office buildings.	Power plant machinery.
Roadway buildings.	Power substation apparatus.
Water stations.	<b>Equipment:</b>
Fuel stations.	Steam locomotives.
Shops and engine houses.	Other locomotives.
Grain elevators.	Freight-train cars.
Storage warehouses.	Passenger-train cars.
Wharves and docks.	Motor equipment of cars.
Coal and ore wharves.	Floating equipment.
Gas producing plants.	Work equipment.
Telegraph and telephone lines.	Miscellaneous equipment.

PASSAGE OF THE GOODING interest bill, to authorize the re-funding of railroad indebtedness to the federal government at a lower rate of interest than the present rate of 6 per cent, was urged by E. G. Buckland, vice-president of the New York, New Haven & Hartford, at a conference with President Coolidge at the White House on November 29.



# George Hannauer Elected President of Boston & Maine

*Indiana Harbor Belt vice-president selected because of his standing as terminal railroad operating officer*

**G**EORGE HANNAUER, who has been associated with the Indiana Harbor Belt since 1907 and vice-president of that company since 1920, was, on December 1, elected president of the Boston & Maine at a special meeting of the board of directors of that company. Mr. Hannauer will take up his new duties with the beginning of the coming year.

The announcement of Mr. Hannauer's election indicates that he was selected because of his outstanding position among railroad officers in the operation of terminal railroads. He has spent his entire railroad career in the service of such railroads, first at St. Louis and then at Chicago. He has frequently been called upon to make special studies of terminal operation problems in other cities and, in fact, was retained to make such a study of the Boston & Maine's terminal problems at Boston last spring. He will also be recognized as the inventor of the car retarder system. The Boston & Maine is not strictly speaking a terminal property in the same sense as the Terminal Railroad Association of St. Louis or the Indiana Harbor Belt but it does nevertheless have an extremely complicated terminal problem. This results from several factors, such as the fact that it serves a thickly settled area with a large proportion of short haul tonnage. Similarly a large share of its traffic terminates in its own territory. Most important, however, the Boston & Maine is a consolidation of a number of formerly independent roads, each of which had its independent terminals at Boston. Unified operation of the Boston & Maine's passenger terminals at Boston was effected when the consolidation took place but there has never been a satisfactory merger of the freight terminal operations of the several constituent railroad properties. Much study has of late been given to this problem and, as noted, Mr. Hannauer was called upon in a consulting capacity in this connection. An elaborate unification plan has now been drawn up and announcement of its details was made on Thursday. Apparently Mr. Hannauer's most important task when he takes up his new duties will be to carry out this unification plan and to supervise the expenditure of the money required to put it into effect.

A statement issued by Homer Loring, chairman of the board of directors, outlines the situation more in detail as follows:

"In the election as president of the Boston & Maine of George Hannauer, vice-president of the extensive system of terminal railways at Chicago, New England obtains the services of a railroad executive of high rank.

"Mr. Hannauer is an outstanding figure among the railroad officials of the country in the operation of terminal railroads, of which the Boston & Maine is a conspicuous example. As general superintendent, general manager, and later as vice-president and general manager of the terminal railways centering in Chicago, he has handled the difficult situation involved in operations in that city,—which is the greatest rail center in the world,—in a manner to meet the satisfaction not only of the many railroads which exchange traffic there, but of the shipping and receiving public. With service as a prime consideration, Mr. Hannauer has been able also to apply progressive ideas to effect improved operating results.

"He is not a stranger to the Boston & Maine and its problems. Associated with John F. Stevens, former chief engineer of the Panama Canal, Mr. Hannauer was engaged for some weeks last spring in studies which led to the plans for the Boston & Maine's new Boston freight yards and terminal facilities. The favorable impressions which he left at that time with those who came in contact with him were confirmed by railroad officials and shipping public with whom he was associated at Chicago."



George Hannauer

Mr. Hannauer succeeds as president James H. Hustis who resigned last April. It is an interesting coincidence that Mr. Hannauer, like Mr. Hustis, will come to the presidency of the Boston & Maine from the position of vice-president and general manager of a New York Central subsidiary. In Mr. Hustis's case the subsidiary was the Boston & Albany. Mr. Hannauer will have a very different position to fill from that which was filled by Mr. Hustis. Mr. Hustis found the road in a poor financial position and with an unfavorable public opinion. One of the causes of the former difficulty was the Boston & Maine's peculiar financial arrangement with its heavy fixed charges of rentals for leased lines. The latter difficulty was explained as largely due to the effects of Charles S. Mellen's attempt to build up a single New England railroad system with the New Haven as a nucleus. Mr. Hustis effected a marked improvement in public relations. The financial difficulty finally resulted in a receivership and in a re-organization which has recently

been superseded by another stringent re-organization, this time without receivership.

For some time the road's affairs have been guided by Homer Loring who was first put in charge as chairman of the executive committee but who is now chairman of the board. Mr. Loring has effected many changes, notably with respect to the re-organization of the capital structure already mentioned. He has established a motor bus highway service and has received authority to carry out an extensive physical rehabilitation program. An important part of his program has been in the form of proposals to abandon non-lucrative branch lines. The investors presumably have welcomed the improved earning position of the property but it is also true that the public on the lines where service has been reduced or eliminated is not regarding the changes with favor. Mr. Hannauer presumably will not be confronted with the discouraging financial problems with which Mr. Hustis had to contend. He will have more money to spend for capital improvement than Mr. Hustis had, but besides having the problem of spending this money to best advantage he will also have the problem of retaining public favor, which is always important but which seems to have been particularly so in the case of the New England roads.

George Hannauer was born on December 19, 1872, at St. Louis, Mo. He entered railway service on September 24, 1890, with the Terminal Railroad Association of St. Louis. From March 1, 1903, to April 8, 1907, he was superintendent of the Wiggins Ferry Company. He then became superintendent of the Indiana Harbor Belt, was on January 1, 1911, promoted to general superintendent and on July 1, 1912, to general manager. Following the return of the railroads to private control on March 1, 1920, he was elected also vice-president. In 1922, he gave up his duties as general manager but retained those of vice-president. Besides being vice-president of the Indiana Harbor Belt, Mr. Hannauer is also vice-president of the Chicago Junction and of the Chicago River & Indiana. The Indiana Harbor Belt is controlled jointly by four railroads by means of stock ownership. The New York Central owns 30 per cent of the stock, the Michigan Central also 30 per cent and the Chicago & North Western and the Chicago, Milwaukee & St. Paul each owns 20 per cent. The company owns 46 miles of track and uses 71 miles of track of other companies.

## Buda Company Develops Turbo-Generator for Train Control

**T**HERE are certain operating characteristics which are recognized as desirable of attainment in the design of any turbo-generator to be used as the power source for the train control equipment on a locomotive. With the continuous inductive train control system such electrical features of the generator as stability of voltage under changes in load and freedom from "commutator pulsations" are recognized as advantageous. These desirable characteristics are said to be found in the new Buda-Ross Model-900 T.C. 900-watt turbo-generator made by the Buda Company, Harvey, Ill. Other noteworthy features of this power unit are the accessibility of the fly-ball governor which simplifies maintenance, the adjustment of the governor which can be made with the equipment running, the use of three ball bearings, a circulating oil system for lubrication and a ventilating arrangement to keep the electrical end of the unit at a safe operating temperature. The unit is said

to have a 50 per cent overload capacity. The governor assembly is particularly accessible and can be applied to the machine in a few minutes. Due to the arrangement of the governor the voltage of the generator can be adjusted while the equipment is running. Hardened knife edge contacts are provided at all joints in the governor which insure long life and permanency of adjustment. There is a ball bearing of the standard annular type in the governor which is also instrumental in stabilizing the adjustment of the valve for a long period.

The rotor buckets are made of Monel metal and are securely locked and riveted in the turbine wheel. Removal of the steam nozzle and return nozzle block can be accomplished without taking the machine apart, it being necessary only to remove one plate in order to do this. A steam-proof housing is provided for the main ball bearing which is located in the wheel directly under the buckets. In addition to this main bearing and the governor bearing there is a third ball bearing known as



Buda-Ross Model-900 T. C. Turbo-Generator Designed for Train Control Service

the "outboard" bearing at the commutator end of the generator which has enough end play to compensate for inequalities in expansion of the shaft and armature. A circulating oil system lubricates the entire governor mechanism and main bearing in the turbine. Steam is normally prevented from entering the governor chamber by virtue of a vacuum existing in it. If this vacuum should be destroyed the condensed steam which may accumulate is collected in a trap which forces the water to the bottom of the oil and up through the trap to the atmosphere.

A practically smooth voltage wave is obtained with the Model-900 T.C. machine due to the special construction of the armature. Wire with fire-proof insulation has been used for the armature winding to avoid insulation troubles that might otherwise be encountered at the temperature existing in the turbo-generator during operation. All four field coils are identical thus permitting a spare field coil to be used in any position. The brush holders are of the Buda standard arrangement and are mounted interchangeably on an insulating ring which in turn is secured to the generator frame in such a manner that the end cover, bearing and bracket may be removed without disturbing the alignment of the brush holders. Two separate ventilating systems are incorporated in the generator end of the unit, one for the interior of the armature case and winding, and the other for the general ventilation of the machine.



## General News Department

The Signal Section of the American Railway Association is to hold its annual meeting at the Palmer House, Chicago, on Monday and Tuesday, March 7 and 8, 1927.

The Atchison, Topeka & Santa Fe has purchased a car repair plant near Kedzie avenue and Thirty-fifth street, Chicago, with 50 acres of ground, which it has leased for the past 15 years.

Division VI, Purchases and Stores, American Railway Association, will hold its 1927 meeting at Chicago in May or June. There will be no exhibits of railway supply manufacturers.

The Pacific Railway Club will hold its next meeting December 9th, at Hotel Oakland, Oakland, Cal., when a paper will be read on "History of the Santa Fe Railroad," by Lacy L. Galbraith.

The New England Railroad Club will hold its next meeting, December 14, at the Copley-Plaza, when a paper will be read on "Automatic Train Control," by G. E. Ellis, secretary of the committee on train control of the A. R. A.

The Car Foreman's Association of Chicago will hold its next meeting at the Great Northern Hotel, December 13, when F. A. Starr, supervisor of reclamation of the C. & O., will read a paper on, "Reclamation and Conservation of Materials."

Albert E. King, general secretary-treasurer of the Brotherhood of Railway Trainmen since 1897, died on November 28, at his home in Cleveland, Ohio.

The Cleveland Steam Railway Club will hold its next meeting on December 6, on which occasion a paper will be read on "Progress and Possibilities in Safety," by T. H. Carrow, supervisor of safety of the Pennsylvania, and chairman of the safety section of the A. R. A.

The St. Louis Railway Club will hold its next meeting at the Statler Hotel, December 10, when A. T. Perkins, manager for the receiver, the United Railways of St. Louis, will read a paper on, "The Start of the Second Century of Modern Transportation."

The Railroad Motor Transport Conference in Chicago, December 1, voted to instruct its chairman to seek affiliation with the American Railway Association. R. H. Newcomb, assistant to the vice-president of the New Haven, was elected secretary; other officers for the permanent organization are the same as those serving in the pro tem period. It was decided tentatively to hold the next meeting in San Francisco in April.

Railroad consolidation legislation was mentioned recently as a possibility for the coming short session of Congress in a statement by Chairman Snell of the House committee on rules, outlining his views regarding the legislative program. Referring to the hearings held on the Parker consolidation bill before the committee on interstate and foreign commerce at the last session he said: "The committee has a bill that I think is fairly acceptable to all parties concerned, but it has not come before the House and I do not know how the House would look upon it."

The American Society for Testing Materials will hold its next annual convention at French Lick Springs, Ind., on June 20-24, 1927. The selection of a meeting place in the middle west by the executive committee constitutes a departure in the history of this organization since it is the first time that a convention of this organization has been held in the middle west. The next convention will mark the twenty-fifth anniversary of the incorporation of this society and it is planned to make appropriate recognition of this fact in the program.

L. W. Baldwin, president of the Missouri Pacific, with a silver spade, broke the first ground for the construction of the Missouri Pacific 22-story office building at St. Louis, Mo., on Thanks-

giving morning, November 25, before a group of 1,500 citizens of St. Louis and employees of the railroad. Short addresses were made by Mr. Baldwin, Victor Miller, mayor of St. Louis; E. J. White, vice-president of the Missouri Pacific; E. A. Hadley, chief engineer and Carl F. G. Meyer, former president of the Chamber of Commerce. With the exception of space for stores on the ground floor, the entire 22 stories of the structure, which involves an expenditure of \$2,000,000, will be occupied by Missouri Pacific offices. The building will face the new St. Louis Memorial Plaza. When the building is completed, late in 1927, Missouri Pacific office facilities in St. Louis will have been increased 20 per cent.

### Side Oiling Truck Bearing—A Correction

On page 1056, in the November 27, 1926, issue of the *Railway Age* was published a description of a side oiling engine truck and trailer bearing. The name of the manufacturer, the More-Jones Brass & Metal Company, St. Louis, Mo., was inadvertently omitted from the article.

### Trainmen Get 7 Per Cent Increase

An increase of 7½ per cent in wages was granted trainmen employed on eastern railroads, according to an announcement made late, December 2, by the Arbitration Board after about two weeks consideration of the testimony put in at the New York hearing on the request of the men for an increase of 20 per cent. The increase granted was made retroactive to December 1, 1926, and was the first action of the first board of arbitration to function under the new law. The increase will add about \$15,000,000 to the eastern road's pay roll.

### C. N. R. Has Good Month in October

Gross earnings of the Canadian National for the month of October amounted to \$27,550,742, operating expenses totalled \$19,233,283, leaving an operating net of \$8,317,458.

For the ten months ending October 31, the traffic receipts of the system were \$217,047,034, an increase of \$20,602,953, or 10.49 per cent, as compared with the corresponding period of last year. The net earnings amounted to \$34,060,792 in the ten months, an increase of \$13,575,071, or 66.27 per cent over the corresponding period of 1925.

The relation of working expenses to gross earnings continues at the improved level, the operating ratio being 69.81 per cent for the month of October, 1926.

### The New Haven's New Yard at Hartford

On Friday, November 26th, officers of the New York, New Haven & Hartford made their first public inspection of the company's new \$800,000 freight classification yard at Hartford, Conn. This new yard is approximately two miles long and one-half mile wide and includes 29 classification tracks, 25 of which are now in use. It also includes a receiving yard of eight tracks and a departure yard of nine tracks. Features of the classification yard include a complete car retarder system and flood lights for night operation.

The inspection trip, which included the locomotive terminal and car repair facilities in East Hartford and the new Morgan Street freight house, was made by President E. J. Pearson, Vice-president Edward G. Buckland, General Manager J. A. Droege, General Superintendent E. E. Regan, Superintendent C. A. Mitchell and a number of public utilities commissioners.

### Railway Association of Canada

#### to Govern Poster Displays

The operating committee of the Railway Association of Canada will handle applications from other than railway interests for permission to display posters or similar matter on station property, as a result of the large number of requests received by

the railways from outside interests for permission to display posters in stations or on station property. The limited space on station notice boards, and the undesirability of having posters indiscriminately displayed at stations also brought about the inauguration of this practice. This procedure will insure uniform action by the railways and relieve individual companies from the onus of declining applications when it appears desirable to do so.

### Canadian Pacific Earnings Increase

In spite of the slowness of the grain crop there was a substantial increase in the earnings of the Canadian Pacific Railway in October this year over the same month last year, the increase in net being the largest since last July, the net earnings of nearly \$8,000,000 being the second highest the road has ever shown for October, the record being \$8,160,988 for October, 1923. The ten-months period from January to October this year was the second largest showing for that period with gross earnings of nearly 160 millions, having been exceeded only in 1920, when gross was upwards of 172 millions. Net for the ten months of over 36½ millions was the best showing made since 1917, representing an increase of approximately 7½ millions over the corresponding period of 1925.

### Seattle to New York at 38 Miles an Hour

A special train of nine baggage cars loaded with silk, which arrived in New York on November 23 at 6:41 a. m. from Seattle, Wash., made the trip in 81 hrs., 41 min.; said to be a record over the route which was traversed. The train left Seattle at 6 p. m. Pacific Time, November 19, and ran over the Great Northern, 1,775 miles, to St. Paul; over the Chicago Great Western, 425 miles, to Chicago; the Wabash, 513 miles, to Buffalo and the Delaware, Lackawanna & Western, 396 miles, to New York. These figures are taken from the Official Guide, making the total distance 3,109 miles and the rate of speed, including stops and transfers, 38.06 miles an hour. The time from Seattle to Chicago was reported as 55 hours and from Chicago to Buffalo, 12 hours.

### Wage Increases Granted

Wage increases affecting 40,000 shopmen and ranging from one to three cents an hour have been granted by western railroads including the Chicago, Rock Island & Pacific, the Atchison, Topeka & Santa Fe, the Chicago, Burlington & Quincy, the Chicago & Eastern Illinois, the Ft. Worth & Denver City, the Union Pacific, the Wabash, the Illinois Central, the Great Northern, and the Chicago & Alton. The Chicago, Rock Island & Pacific granted an increase of two cents an hour to its metal workers and one cent an hour to its car repairmen. The Great Northern increase was one cent an hour for men already receiving 78 cents and over, and two cents for those receiving less. The Chicago, Burlington & Quincy increased shop wages generally one cent, while its subsidiary, the Ft. Worth & Denver City, where the basis was lower, increased the wages two cents. The Wabash increased wages two and one-half cents an hour, making the metal mechanics' rate 76 cents. Increases on other roads amounted to two cents an hour with the exception of the Chicago & Eastern Illinois which granted increases ranging from one to three cents an hour to its shop employees and maintenance workers in the signal and telegraph departments.

### Work to Avert Canadian Strike

During the past week-end efforts were made by the Dominion Government to persuade the parties to the railway wage dispute to get together and avert a strike and consequent dislocation of traffic. On November 28, Charles A. Dunning, minister of railways and canals at Ottawa, held a conference there with Sir Henry Thornton, president of the Canadian National, and E. W. Beatty, president of the Canadian Pacific. At the conclusion of the conference Mr. Dunning authorized the following statement:

"The presidents of the two chief railway systems of Canada—Mr. Edward W. Beatty, of the Canadian Pacific, and Sir Henry Thornton, of the Canadian National—were in Ottawa today at the instance of Hon. Charles A. Dunning, Minister of Railways, with whom they were in conference during the after-

noon. At the conclusion of the interview, Mr. Dunning stated that he had sent for the railway chiefs to urge upon them the importance of resuming negotiations and exploring every possible avenue of settlement. Mr. Dunning expects to confer with the representatives of the brotherhoods also on Monday. His object in seeing the two presidents and the representatives of the men is not to suggest terms of settlement but to urge upon both parties to the dispute the importance of an amicable adjustment of the difficulty in the interests of the country. The minister feels that a strike at the present time on the Canadian railways would be disastrous and that the government—whose interests are the public interests—should spare no effort to bring the parties together."

### Illinois Central Settles Tax

#### Controversy with State of Illinois

A tax suit instituted by the state of Illinois in 1906 against the Illinois Central was ended on November 24 in an agreement by the railroad to change its method of computing charter line gross receipts, pay the state \$1,500,000 as the balance of taxes due since 1906 and assume the unpaid costs of the litigation. A final decree was entered in the LaSalle County Circuit Court, following which other litigation pending in Cook county also was dropped. Under the terms of the charter granted the Illinois Central in 1851, the railroad was given 2,595,133 acres of land ceded to the state by the federal government to further the construction of a lakes-to-the-gulf railway. In return the railroad agreed to pay into the state treasury 7 per cent of its gross income. The length of the original charter lines is 705.5 miles, while the mileage of the whole railroad has grown to 4,871 miles. The mileage other than the original charter line has been subjected to ordinary taxation. The state contended that earnings were not properly apportioned between charter lines and non-charter lines and because of this the railroad deprived the state of millions of dollars.

For the past 20 years the road has allocated more than 29 per cent of its total gross receipts on its entire 4,871 miles in making returns for Illinois on the 705 miles of charter lines. For the year 1916 the company paid Illinois \$1,011,918, and in 1922 the payment increased to \$3,170,226, while for the six months ending April 30, 1926, the payment amounted to \$1,636,570.

### Japanese to Study American Railways

A group of eight Japanese railway officers arrived in San Francisco, Cal., on November 20 and departed immediately for different sections of the United States and Canada to begin a six months' study of American railways. After studying in



Chikao Oinouye, T. Sokamoto, T. Hayakawa, K. Hagimura, K. Hashima, G. Kurata, T. Ohtsubo, Mizao Tetsuka

the United States and Canada some of the men will proceed to Europe while others will return to Japan. Chikao Oinouye, chief engineer of the Shimonoseki division of the Japanese Government Railways, will study sub-aqueous tunnels as the



Japanese railways are planning a tunnel from the island of Honda, the main island of the Japanese group, to the island of Kuyshu, the southern island. This tunnel will be over a mile in length and about seven fathoms under water and is to cost approximately \$15,000,000. K. Hashima, who is on the engineering staff of the Kokkaido Railways, on the northernmost island of Japan, will study snow-fighting and after a short tour of the United States will make his headquarters at Winnipeg, Man., to survey the snow-fighting methods and equipment employed by the Canadian National. G. Kurata, construction engineer of the government railways, will make a study of construction methods employed in the United States; K. Hagimura, assistant chief engineer in the architectural division, will devote his time to railway building and T. Hayakawa will study traffic. T. Ohtsubo and Mizao Tetsuka, attorneys, will devote their time to management.

### Traveling Primary Schools

The illustration given herewith shows the main room of a railway school car in use on the Canadian Pacific in Western Ontario. There are two of these cars, provided by the province of Ontario, one on the Canadian Pacific and one on the Canadian National. Both of the cars also carry small public libraries, of which one-third of the books are of kinds sought by adults.

These cars are used for the education of children of districts too thinly settled to justify the erection of permanent school-houses. In the newer part of Ontario there are many groups of people who do not represent permanent communities, their places of abode being changeable in accordance with development in railroad construction or other pioneer work.

Each car contains a schoolroom with desks and seats for 16



Canadian Traveling School

pupils, with other paraphernalia; and there is a bedroom and a kitchen for the teacher.

A typical schedule shows a car stopping at seven places on a railroad 120 miles long. At each stop the pupils, from three or four to a dozen or more, receive daily instruction for a few days or a week and then are provided with home-work to keep them employed until the car comes around again. The cars pass over their respective routes about once in five weeks.

W. O. Carson, provincial inspector of public libraries, plans to provide for the instruction of adults as well as children in these cars and the teacher will, so far as possible, assist persons who desire evening instruction.

### Superintendents' Association Selects

#### Subjects for Consideration

At a meeting of the Executive and Advisory committee of the American Association of Railroad Superintendents at St. Louis, Mo., on November 20, the following subjects were selected for consideration and report at the next annual meeting which will be held in San Francisco, Cal., on June 21-24, 1927:

The Relative Merits of Hump and Flat Yards and the Traffic

Which Warrants the Conversion of a Flat Yard into a Hump Yard.

The Advisability of Establishing Flat Per Car Rates in Large Terminals for Transferring and Adjusting of Loads. What Improvement, If Any, Has Developed in Eliminating the Unnecessary Transfer of Cars at Interchange Points.

Operating Trains Against the Current of Traffic. Possibilities of Reversing Traffic on Double-Track Lines to Increase Track Capacity. What Are the Best Methods and What Safeguards Should Be Thrown Around Such Operations? Signaling on Single Track Without Operators of Train Orders.

The Motor Rail Car's Place in Branch Line and Main Line Service.

The Best Method of Keeping Employees Advised of the Amounts Paid for Loss and Damage to Freight with a View to Enlisting Their Co-operation in Reducing This Expense.

Does the Freight Car Spend Too Much of Its Time in Terminals and If So, What is the Remedy? What Further Can Be Done to Increase the Daily Average Mileage of Freight Cars?

The Most Economical Train Load for a Given District or Division, Stressing the Gross Tons Per Train Hour.

How to Handle Continuously Increasing Business Without Increasing the Number of Cars.

Continue the Study of the Motor Bus and the Motor Truck as Auxiliary Agencies in Railway Transportation. Cost and Methods of Operating Motor Coaches by Railroads.

### Collection of Freight Charges Facilitated

A plan for the collection of freight charges which eliminates the handling of money or blank checks by draymen and other methods used by shippers to pay freight charges on miscellaneous freight called for by the drayman, has been devised by W. N. Hicks, joint agent of the Georgia Railroad, the Atlanta & West Point and the Louisville & Nashville, at Atlanta, Ga. The plan not only automatically provides for the collection of freight charges as may be delivered on the inbound, but in the same operation arranges for the collection of prepay charges on outbound freight. The basis of the plan is a draft on the company

No. _____	ATLANTA, GEORGIA	192
PAY TO THE ORDER OF <u>W. N. HICKS, AGENT</u> <small>C. R. R. ASSN. L. C. R. R.</small> \$ _____		
FOR FREIGHT AS PER EXPENSE BILLS ENCLOSED <span style="float: right;">DOLLARS</span>		
PAYABLE THROUGH FULTON NATIONAL BANK ATLANTA, GEORGIA FOR THE ACCOUNT OF ATLANTA FLOUR & GRAIN CO. ATLANTA, GEORGIA		
<u>W. N. HICKS, AGENT</u> <small>C. R. R. ASSN. L. C. R. R.</small>		

### A Draft Is Made Out to and Signed by the Agent

with which the railroads do business. After the freight bills are made out they are placed in an envelope, the printed face of which, when signed by the railroad agent, constitutes a draft on the firms involved, the sum of the enclosed bills being entered upon the face of the envelope-draft. The envelope is then sealed and numbered and deposited for collection in the bank in the same manner as ordinary drafts are handled. When the bank has met the draft the receipted freight bills enclosed in the envelope constitute the railroad's receipt for the money represented by each freight bill and the transaction is closed.

### Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—T. L. Burton, 165 Broadway, New York City. Next meeting, May 24-27, 1927, Mayflower Hotel, Washington, D. C. Exhibit by Air Brake Appliance Association.

AIR BRAKE APPLIANCE ASSOCIATION.—J. H. Ainsworth, A. M. Byers Co., 410 Union Bank Bldg., Pittsburgh, Pa. Meets with Air Brake Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—J. D. Gowin, 112 W. Adams St., Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago. Next meeting, June 21-23, 1927, Mackinac Island, Mich.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York. Next annual meeting, November, 1927, Havana, Cuba.

- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.**—J. Rothschild, Room 400, Union Station, St. Louis, Mo. Annual convention, June 21-24, 1927, San Francisco.
- AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.**—C. E. Bell, Seaboard Air Line, Washington, D. C. Next meeting, Chicago.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.**—J. W. Welsh, 292 Madison Ave., New York.
- AMERICAN RAILROAD MASTER TINNERS' COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.**—C. Borchardt, 202 North Hamlin Ave., Chicago, Ill.
- AMERICAN RAILWAY ASSOCIATION.**—H. J. Forster, 30 Vesey St., New York, N. Y.
- Division I.—Operating.—J. C. Caviston, 30 Vesey St., New York.
- Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill. Annual convention, May 10-14, 1927, Memphis, Tenn.
- Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., N. Y.
- Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y.
- Safety Section.—J. C. Caviston, 30 Vesey St., New York. Next meeting, April 19-21, Chicago.
- Telegraph and Telephone Section (including former activities of the Association of Railroad Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York.
- Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago.
- Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.
- Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual convention, March 8-10, 1927, New Palmer House, Chicago. Exhibit by National Railway Appliances Association, March 7-10.
- Construction and Maintenance Section.—E. H. Fritch. Next meeting, March 8-10, 1927, Chicago.
- Electrical Section.—E. H. Fritch.
- Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York. Annual meeting, March 7-8, 1927, Chicago.
- Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual meeting, June 7-9, 1927, Montreal, Que. No exhibits at this meeting.
- Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago. Annual convention, 1927, Louisville, Ky.
- Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y. Exhibit by Railway Supply Manufacturers' Association.
- Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill. Annual meeting, June 14-17, Quebec, Canada.
- Car Service Division.—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.**—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Exhibit by Bridge and Building Supply Men's Association. Annual convention, 1927, Minneapolis.
- AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.**—H. W. Byerly, General Immigration Agent, Northern Pacific, St. Paul, Minn. Annual meeting, June, 1927, Detroit, Mich.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.**—(Works in co-operation with the American Railway Association Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Next annual convention, March 8-10, 1927, New Palmer House, Chicago. Exhibit by National Railway Appliances Association, March 7-10.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Annual convention, September 7-9, 1927, Hotel Sherman, Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.
- AMERICAN SHORT LINE RAILROAD ASSOCIATION.**—T. F. Whittelsey, 1319-21 F St., N. W., Washington, D. C.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.**—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, Associate Mechanical Editor, *Railway Age*, 30 Church St., New York. Annual meeting, Dec. 6-9, 29 W. 39th St., New York.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.**—E. J. Stocking, 111 West Washington St., Chicago. Annual meeting, January 25-27, 1927, Nashville, Tenn.
- ASSOCIATION OF RAILWAY CLAIM AGENTS.**—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual convention, 1927, New Orleans, La.
- ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.**—Jos. A. Andreucetti, C. & N. W., Room 413, C. & N. W. Station, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.
- ASSOCIATION OF RAILWAY EXECUTIVES.**—Stanley J. Strong, 17th and H Sts., N. W., Washington, D. C.
- ASSOCIATION OF RAILWAY SUPPLY MEN.**—C. O. Jenista, Barco Mfg. Co., 1801 Winnemac Ave., Chicago. Meeting with International Railway General Foremen's Association.
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.**—D. A. Hultgren, Massey Concrete Products Corp., Chicago. Meets with American Railway Bridge and Building Association.
- CANADIAN RAILWAY CLUB.**—C. R. Crook, 129 Charron St., Montreal, Que.
- CAR FOREMEN'S ASSOCIATION OF CHICAGO.**—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.
- CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.**—J. W. Krause, 514 East Eighth St., Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth St., Los Angeles.
- CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.**—F. G. Wiegman, 721 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.
- CENTRAL RAILWAY CLUB.**—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday each month, except June, July, August, Hotel Statler, Buffalo, N. Y.
- CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.**—B. S. Johnson, W. H. Miner, Inc., 209 S. La Salle St., Chicago.
- CINCINNATI RAILWAY CLUB.**—D. R. Boyd, 811 Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.
- CLEVELAND STEAM RAILWAY CLUB.**—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, except July, August, September, Hotel Hollenden, Cleveland.
- INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.**—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Next convention, August 16-18, 1927, Hotel Lafayette, Buffalo, N. Y. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.
- INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.**—W. R. Walsh, Ewald Iron Co., Louisville, Ky.
- INTERNATIONAL RAILWAY CONGRESS.**—Office of Permanent Commission of the Association, 74 rue du Progres, Brussels, Belgium. General secretary, P. Ghilain. Next session of the Congress, Spain, 1930.
- INTERNATIONAL RAILWAY FUEL ASSOCIATION.**—L. G. Plant, 80 E. Jackson Blvd., Chicago. Annual convention May 10-13, 1927, Hotel Sherman, Chicago. Exhibit by International Railway Supply Men's Association.
- INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.**—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn. Annual convention, September 6-9, 1927, Chicago.
- INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.**—W. H. Harris, 343 S. Dearborn St., Chicago. Earl E. Thulin, assistant secretary, 715 Peoples Gas Bldg., Chicago. Meets with International Railway Fuel Association.
- MASTER BOILER MAKERS' ASSOCIATION.**—Harry D. Vought, 26 Cortlandt St., New York. Next annual convention, May 3-6, 1927, Hotel Sherman, Chicago.
- MOBILE TRAFFIC AND TRANSPORTATION CLUB.**—T. C. Schley, 71 Conti St., Mobile, Ala. Regular dinner meetings 6 p. m., on 2nd and 4th Monday of each month, Cawthon Vineyard, Mobile, Ala.
- NATIONAL ASSOCIATION OF RAILROAD TIE PRODUCERS.**—E. A. Morse, vice-president, Potosi Tie & Lumber Co., St. Louis, Mo. Next convention, January 27 and 28, 1927, Nashville, Tenn.
- NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.**—James B. Walker, 49 Lafayette St., New York. Annual meeting, October, 1927, Dallas, Tex.
- NATIONAL RAILWAY APPLIANCE ASSOCIATION.**—C. W. Kelly, 845 South Wabash Ave., Chicago. Annual exhibition, March 7-10, 1927, at convention of American Railway Engineering Association.
- NATIONAL SAFETY COUNCIL.**—Steam Railroad Section: J. E. Long, Superintendent Safety, D. & H., Albany, N. Y.
- NEW ENGLAND RAILROAD CLUB.**—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.
- NEW YORK RAILROAD CLUB.**—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August.
- PACIFIC RAILWAY CLUB.**—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2d Thursday in month, alternately in San Francisco and Oakland.
- RAILROAD MOTOR TRANSPORT CONFERENCE.**—F. J. Scarr, Supervisor Motor Service, Penna. R. R., Philadelphia.
- RAILWAY ACCOUNTING OFFICERS ASSOCIATION.**—E. R. Woodson, 1116 Woodward Building, Washington, D. C. Annual meeting, June, 1927, Denver, Colo.
- RAILWAY BUSINESS ASSOCIATION.**—Frank W. Noxon, 1406 Packard Bldg., Philadelphia, Pa.
- RAILWAY CAR MANUFACTURERS' ASSOCIATION.**—W. C. Tabbert, 61 Broadway, New York.
- RAILWAY CLUB OF PITTSBURGH.**—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.
- RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.**—Edward Wray, 9 S. Clinton St., Chicago.
- RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.**—F. W. Venton, Crane Co., 836 S. Michigan Ave., Chicago. Meets with Traveling Engineers' Association, September, 1927.
- RAILWAY FIRE PROTECTION ASSOCIATION.**—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October, 1927.
- RAILWAY REAL ESTATE ASSOCIATION.**—R. H. Morrison, C. & O. Ry., Richmond, Va.
- RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.**—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division and Purchases and Stores Division, A. R. A. No exhibits in 1927.
- RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.**—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.
- RAILWAY TREASURY OFFICERS' ASSOCIATION.**—F. L. Koentz, Elgin, Joliet & Eastern Ry., Chicago.
- ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.**—T. F. Donahoe, Gen. Supvt. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual convention, September 20-22, 1927, Buffalo, N. Y. Exhibit by Track Supply Association.
- ST. LOUIS RAILWAY CLUB.**—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.
- SIGNAL APPLIANCE ASSOCIATION.**—F. W. Edmunds, West Nyack (Rockland Co.), N. Y. Meets with A. R. A., Signal Section.
- SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.**—Clyde Kimball, Inman Shops, Atlanta, Ga. Meets semi-annually.
- SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.**—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.
- SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.**—R. G. Parks, A. B. & A. Ry., Atlanta, Ga.
- SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—W. R. Mau, Vanadium-Alloys Steel Co., 1440 W. Lake St., Chicago.
- TRACK SUPPLY ASSOCIATION.**—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association, September, 1927.
- TRAVELING ENGINEERS' ASSOCIATION.**—W. O. Thompson, Gen. Supt. R. S., New York Central, Buffalo, N. Y. Annual meeting, September, 1927, Hotel Sherman, Chicago. Exhibit by Railway Equipment Manufacturers' Association.
- WESTERN RAILWAY CLUB.**—Bruce V. Crandall, 189 West Madison St., Chicago. Regular meetings, 3rd Monday each month, except June, July and August.



## Traffic News

The Traffic Club of New York, at its meeting on November 23 elected as president for the ensuing year H. C. Snyder, freight agent of the Erie.

The Southern Pacific reports that the movement of lettuce from California eastward this year will amount to 27,000 carloads, or three times the amount forwarded in 1922. The estimates this year call for 12,800 carloads from the Coast division of the Southern Pacific and 16,700 cars from the Imperial Valley.

The Philadelphia Rapid Transit Company has discontinued its airplane passenger service between Philadelphia and Norfolk, Va. A total of 3,620 passengers have been carried, and all in safety; and all engines have functioned perfectly at all times on each of the three planes used. Of 670 trips scheduled 66 were cancelled because of adverse weather conditions.

Bituminous coal production again broke all previous weekly records in the week ended November 20 when the total output, as estimated by the Bureau of Mines, was 14,253,000 net tons, an increase of 3.2 per cent over that of the week preceding. The highest production ever recorded for a week in any year prior to 1926 was 13,344,000 tons in the last week before the great strike of 1919.

The Norfolk & Western announces that, beginning about January 1, a sleeping car is to be run regularly between Bluefield, W. Va., and Washington, D. C. The car will leave Bluefield at 8:50 p. m., on train 16, and at Roanoke will be transferred to train 42 and run through to Washington by way of Lynchburg and the Southern Railway. Westbound, the car will leave Washington at 9:50 p. m. and arrive at Bluefield at 8:10 a. m.

The industrial traffic manager, his functions, the information he requires, his value to a company, and his place in an organization, constitute the subject of a "Business Organization Leaflet" which has been issued by the Policyholders' Service Bureau of the Metropolitan Life Insurance Company, New York City. This study was made at the request of group insurance policyholders. Copies may be had from the Policyholders' Service Bureau, 1 Madison avenue, New York.

The Missouri Pacific has inaugurated additional passenger service between Omaha, Neb., and St. Louis, Mo., which will afford connections at Kansas City for Little Rock, Ark., and Hot Springs. The new train leaves St. Louis at 6:28 p. m. and arrives in Omaha at 8:30 a. m. Returning it leaves Omaha at 5:45 p. m. and arrives in St. Louis at 7:42 a. m. Hot Springs cars arrive in Little Rock at 2:55 p. m. and Hot Springs at 5 p. m. Returning, the cars leave Hot Springs at 1:15 p. m., Little Rock at 3:10 p. m., and arrive at Omaha at 3:40 p. m., next day.

The program of the 16th regular meeting of the Southeast Shippers' Advisory Board, to be held at the Hotel Roosevelt, New Orleans, La., on December 10, will include commodity committee reports, the forecast of car requirements for the first quarter of 1927, individual railroad reports and the election of officers. J. J. Pelley, president of the Central of Georgia, will speak on "Prosperity's Balance Wheel," while P. E. O'Dell, vice-president of the Gulf, Mobile & Northern, will address the meeting on "Public Relations and the Part Played Therein by the Rank and File of Railroad Employees." J. E. Hutchison, vice-president of the St. Louis-San Francisco, will outline the activities and accomplishments of the railroads in the southwest.

The Wabash has inaugurated a new train between St. Louis, Mo., and Kansas City, and has improved its service between St. Louis and Omaha, Neb., and between St. Louis and Des Moines, Iowa. Under the new schedule adopted the train leaves St. Louis at 7:30 p. m. instead of 6:30 p. m. as previously, and arrives in Omaha at 7:30 a. m. instead of 9:40 a. m. Returning, it leaves Omaha at 8 p. m. and arrives in St. Louis at 8 a. m. The new

train leaves St. Louis at 11:55 p. m. and arrives in Kansas City at 7:30 a. m. Returning, it leaves Kansas City at 11:55 p. m. and arrives in St. Louis at 7:30 a. m. Train No. 5 now leaves St. Louis at 9 p. m. instead of 10:30 p. m. and arrives in Kansas City at 7 a. m. instead of 7:30 a. m., while returning it leaves Kansas City at 9 p. m. instead of 10:30 p. m., and arrives in St. Louis at 7 a. m. as previously. The St. Louis-Des Moines train leaves St. Louis at 9 p. m. instead of 6:30 p. m. and arrives in Des Moines at 8:30 a. m. instead of 7 a. m. Returning, it leaves Des Moines at 7:30 p. m. instead of 8 p. m. and arrives in St. Louis at 8 a. m. instead of 7:25 a. m. The St. Louis Special which now leaves Chicago at 12:40 p. m., after December 5, will leave at 2:30 p. m., and will arrive in St. Louis at 10:00 p. m., instead of 8:30 p. m. This train will carry through sleeping car service to Hot Springs by way of the Missouri Pacific, giving earlier morning arrival at Hot Springs.

### Sleeping Cars to Mexico Not Taken Off

J. D. Noriega, traffic manager of the National Railways of Mexico, advises that the report of the suspension of Pullman sleeping car service between Mexico City and points in Texas is absolutely without foundation. This service has continued without interruption between El Paso and Mexico City; El Paso and Guadalajara; Houston and Tampico; and San Antonio and Mexico City via both Laredo and Eagle Pass.

### Panama Canal Traffic in October

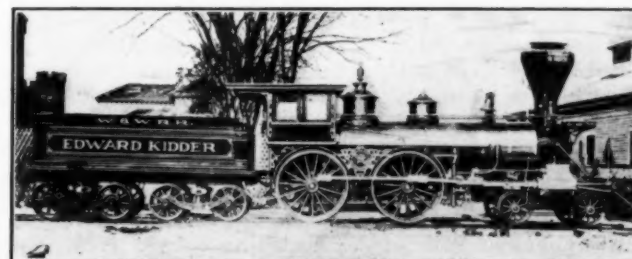
During the month of October, 1926, 445 commercial vessels and 19 small launches passed through the Panama Canal. The daily average number of transits of seagoing vessels for the month was 14.36, and the daily average tolls collection \$64,168. Although collections during the month were less than during the two preceding months, the monthly average for the first 10 months of the present calendar year is slightly in excess of \$2,000,000.

### The Save-to-Travel Association

This organization, formed to encourage the establishment of clubs, like Christmas Clubs, to deposit money periodically in banks for the purpose of accumulating funds to buy tickets, now enjoys the support of 36 railroads and 15 steamship lines, according to a statement made by M. W. Harrison, managing director of the association. The association conducts operations in connection with 666 banks in 447 cities; and in each of 34 states a prominent banker has been appointed state chairman. The national chairman is Francis H. Sisson, vice president of the Guaranty Trust Company, New York City.

### Hoosac Tunnel Enlargement Finished

The Boston & Maine announces that on Thanksgiving Day, the enlargement of the Hoosac tunnel (North Adams, Mass.) to permit the passage of the highest cars, was completed. This extensive work which has been completed in three months, 20 days, without interruption to traffic and without accident, was carried out by working three shifts a day and confining both east-bound and westbound traffic to a single track, through the tunnel, five miles long. The number of trains is about 40 a day. The clearance between top of rail and trolley wire is now 16 ft., and cars 10 ft. 6 in. wide at the eaves can now be run simultaneously on both tracks.



Wilmington & Weldon, (A. C. L.) 1866-1901  
Built by William Mason, Taunton, Mass.

## Commission and Court News

### Interstate Commerce Commission

Increased rates on brass, bronze and copper articles proposed by the railroads in official classification territory and published in purported compliance with the commission's decision in Brass, Bronze and Copper Articles, 109 I. C. C. 351, are found not justified in certain respects in a decision by Division 3 of the commission issued on November 27. The schedules, which had been suspended on protests by shippers, are ordered canceled without prejudice to the filing of new rates in accordance with the findings of the report. In the former case the railroads had proposed rates equal to sixth class rates in place of fifth class, which were not approved except with certain restrictions. Commissioner Hall, dissenting, says that the suspended schedules do not meet the calls of the former report but that they would be justified, in his opinion, if they were put on the sixth-class basis throughout official classification territory, and that both cases should be re-opened.

#### I. C. C. to Investigate Cotton Rates

A general investigation of freight rates on cotton, covering rates from substantially all important producing areas to substantially all destinations, has been instituted by the Interstate Commerce Commission by assigning for hearing thirteen formal complaints on cotton rates with its general rate structure investigation, No. 17,000, Part. 3. Times and places for hearings will be announced later. This follows the practice which the commission adopted in the case of a number of complaints involving rates on petroleum and on iron and steel by assigning them for hearing in connection with parts of No. 17,000. The latter proceeding has now been divided into seven parts. Most of the formal complaints on cotton rates were filed by state co-operative growers' associations, acting under a concerted plan, and ask a general reduction of 20 per cent in cotton rates. These have been assigned to the docket as No. 18,390 and sub-numbers. The commission's notice regarding the investigation is in part as follows:

There are pending before the Commission a number of formal complaints assailing the rates on cotton from substantially all important producing areas to substantially all destinations, including ports of export, to which cotton moves. No. 18390 and sub-numbers assail interstate and export rates only and allege them to be unreasonable only. Nos. 18570 and 18932 attack rates and practices as unreasonable and unduly prejudicial; and No. 18932 also includes an allegation of violation of section 13 with respect to Texas intrastate traffic.

The Commission also has pending a general investigation, No. 17000, instituted pursuant to the so-called Hoch-Smith resolution. The scope of No. 17,000 is broad. It is not the purpose of the Commission at the hearings at present in contemplation to go into all the matters concerning cotton, comprehended by No. 17,000. \* \* \*

No decided or submitted cases relating to the transportation of cotton have been reopened but this will not preclude the Commission, in the disposition of the present inquiry, from reaching conclusions different from those determined in prior cases if such action seems warranted.

In order to perfect plans \* \* \* a preliminary conference will be held at the St. Charles Hotel, New Orleans, La., December 17, at 10 a. m., by representatives of the Commission with representatives of state commissions, shippers and carriers.

### State Commissions

The California Railroad Commission has ordered an investigation into crossing conditions throughout the state, with the idea of establishing a type of crossing signal that will be uniform and definite in action.

### Highway Crossing Protection on the Long Island

The Transit Commission of New York, having investigated conditions at a large number of crossings on the Long Island Railroad in the boroughs of Brooklyn and Queens, City of New York, has ordered visual and audible signals installed at 19 crossings; all of which already have gates, with attendants 24 hours a day. The order requires horizontal flashing red light signals to be installed before February 19 on both sides of the railroad at each crossing; also, at each crossing, an automatic bell; and the company is required immediately to station at each of said crossings for 16 hours of each day, one additional crossing watchman. The order stipulates that it shall not be deemed to authorize the removal of the gates or the withdrawal of any protection now existing.

Inspectors of the commission, examining conditions at 85 crossings in Brooklyn and Queens recently, between the hours of 1 a. m. and 5 a. m., reported that 18 watchmen were found sleeping at their posts.

### Personnel of Commissions

R. Granville Curry, assistant chief counsel of the Interstate Commerce Commission, has resigned to become associated with C. C. McChord, formerly a member of the commission, in the practice of law in Washington.

The Interstate Commerce Commission has announced the appointment of T. P. Healy, heretofore an examiner for the commission, as director of its Bureau of Inquiry, succeeding J. J. Hickey, resigned. Mr. Healy has been with the commission since 1914 and for some time has been connected with the office of Commissioner Henry C. Hall. He was associated with Mr. Hall in the hearings on the commission's tentative consolidation plan. Mr. Hickey has recently been in charge of the presentation of evidence for the commission in connection with the hearings in its investigation of the Chicago, Milwaukee & St. Paul.

### Court News

#### Inflammable Pine Straw Left on Right of Way

The Alabama Court of Appeals holds that permitting highly inflammable pine straw and dry weeds to accumulate at a point on the right of way where a fire subsequently started was negligence, regardless of the care and skill used in the construction and maintenance of the engine which had passed before the discovery of the fire.—*Central of Georgia v. Graves* (Ala. App.) 107 So. 716.

#### State Commission's Order Requiring Destruction of Adequate Station Held Improper

The Louisiana Supreme Court holds that an order of the Public Service Commission requiring the destruction of a station in good repair, of the value of \$24,000 and reasonably adequate, and the construction of a new one to cost between \$30,000 and \$40,000, is contrary to Interstate Commerce Act, §15a, as amended by Transportation Act, §422, providing for rates sufficient, under efficient and economical management and reasonable expenditures for maintenance of way and structure and equipment, for a fair return on the value of the property.—*Vicksburg, S. & P. (La.)* 107 So. 894.

#### Texas Speed Limit for Automobiles Held Void

The Texas Commission of Appeals, Section A, holds that the Texas statute, Penal Code 1925, art. 800, prohibiting the driving of an automobile faster than six miles an hour over an obscured crossing, is void for indefiniteness, so that an automobilist, approaching a crossing at a greater speed, is not guilty of contributory negligence as a matter of law.—*I.-G.-N. v. Mallard* (Tex.) 277 S. W. 1051.

In a similar case the same court states the indefiniteness to be in the requirement of a reduction of speed to six miles an hour at a point "not nearer than 30 ft. from said track" and the conditions under which the reduction of speed is required not being described with sufficient certainty.—*G. H. & S. A. v. Duty* (Tex.) 277 S. W. 1057.



## Foreign Railway News

### New Type Russian Brake Reported Failure

It is reported in press dispatches that experiments intended to demonstrate the efficiency of the new Kazantzev brake, which Russians hoped would replace the type of air brake used in this country, ended disastrously near Tiflis, Georgian Republic, on November 16, when a train of 36 cars equipped with this invention toppled over an embankment while going at full speed. Seven persons were killed, a score injured seriously and several coaches were reduced to splinters because this device failed to work. Iggor Kazantzev, the inventor, was at Tiflis while the experiments were being made.

### London Midland Officers

H. G. Burgess, general manager of the London Midland & Scottish, has resigned after 53 years of service. His resignation will not become effective until March 31, 1927. D. Matheson, deputy general manager for Scotland has resigned, following 35 years of service, his resignation to take effect, December 31, 1926. These two positions and that of accountant-general, will be abolished. Under the reorganization vice-presidents will take the place of general managers in relation to departments. Appointments as vice-presidents have been made as follows: S. H. Hunt, J. Quirey, J. H. Follows, and R. W. Reid.

### International Transport Information Center

A third general European conference on communications and transit will be held next year, according to an announcement in a report issued by the League of Nations on communication and transit. One of the important subjects to be considered is the establishment of a center for the co-ordination of information in regard to transport. The establishment of an international center for the exchange of information and statistics relating to transport would be of benefit to member countries, especially in so far as it would mean easier and better contact with the transport information and representatives of other countries, according to the report.

### Progress on Construction of Samsun-Sivas Railway

Eighteen tunnels and 33 bridges have been constructed on the 15-kilometer stretch of the Samsun-Sivas Railroad (Asiatic Turkey) now open to freight and passenger traffic, according to L'Economiste d'Orient. Work has also advanced considerably on the construction of 16 additional tunnels on the stretch between the fifteenth and one hundred and seventieth kilometer; the cost of grading and laying the rails on this stretch is estimated at approximately \$1,350,000.

There still remains to be constructed a distance of 220 kilometers to Samsun; but since the country still to be traversed is much less rough than that through which the line has already been constructed, the average expenditure per kilometer will be considerably lower, it is believed, for the rest of the line.

### Bolivian Bonds Not to Be Paid

The Bolivia Railway Company formally announced, November 30, that it will be unable to pay off its £5,750,000 5 per cent first mortgage bonds which mature January 1, 1927, although the interest due at that time will be paid under the Bolivian government guaranty, which ceases after that payment. At the same time it was stated that proposals have been made by the railway to the Bolivian government, which owns £2,500,000 of the railway's second income mortgage bonds. The road has never earned the full interest charges on the first mortgage bonds, the interest on which was guaranteed until January 1, 1927. Negotiations now being carried on may result in an arrangement which will pay the bondholders all of the interest the road is earning on the issue. It was said that inability of the road to pay off the issue at the maturity date does not mean that it will be thrown into receivership.

### The Victorian Railway Operations, 1925-26

Operations of the Victorian Railways for the year 1925-26 resulted in a large deficit due mainly to increases in operating expenses. The annual report of the railway commissioners gives the deficit as £182,369, but this amount is independent of the sum of £309,353 which was paid out of consolidated revenue to the department for losses on nonpaying lines, and for the loss incurred in connection with the reduction of 10 per cent in freight charges for certain classes of agricultural produce, which became operative in October, 1924.

The total deficit from railway operations is approximately £491,700. The gross revenue for the year was £12,743,566, a decrease of £86,716 compared with 1924-25. Although operating expenses increased from £9,485,844 to £9,592,160, the amount per average mile open decreased from £2,119 to £2,014. Operating expenses per traffic train mile, however, increased from 10s. 9.51d. to 10s. 10.09d. The interest charges and expenses during the year were £3,092,695.

### Australian Purchases of

#### American Railway Equipment

The total purchases made by the Australian railway department in the year ended June 30, 1925, the latest year for which figures are available, amounted to £2,766,776. Purchases made in Australia amounted to £2,125,861. The total purchase price of importations amounted to £640,915, of which £369,386 was paid to British manufacturers, £219,016 to American manufacturers, and £54,467 to manufacturers of other countries. Although the agitation against importing cars is strong in Australia, it is not believed that American manufacturers will notice any particular difference in the trade during the coming year, for the excellent quality of American material is universally recognized in Australia, and the railways have sent their purchasing agents to the United States on various occasions to familiarize them with American railway equipment, according to the report of assistant trade commissioner Julian B. Foster, Melbourne, to the United States Department of Commerce.

### The New Head of the German Railroad Company

Dr. H. Dorpmueller, the new director-general of the German Railroad Company, was born in 1869 in Elberfeld. He went to school in Aachen (Aix la Chapelle), where he also graduated from the Technical College, receiving his first diploma in 1892. After having passed his last civil service examination, in 1898, Dr. Dorpmueller entered the service of the then Prussian State Railways. In 1907 he received leave of absence in order to enable him to undertake the direction of the engineering bureau of the Shantung Railway in Tientsin, China. In 1908 he became chief engineer of the Tientsin-Pukow, which had been built by the Chinese government with money loaned it by the German-Asiatic Bank, and



Dr. H. Dorpmueller

remained in this position until China entered the war against Germany, in 1917, when he had to retire.

After the war, Dr. Dorpmueller re-entered the German railway service, holding high engineering positions, first in the Stettin and then in the Essen district. In 1922 he became president of the administration of the Oppeln and in September, 1924, of that of the Essen district. On July 1, 1925, he was appointed director and acting director-general of the German Railroad Company, a post which had just been created by the board of directors on account of extended illness of the then director-general, Dr. Oeser.

## Equipment and Supplies

### Locomotives

THE HAMPTON & BRANCHVILLE ordered one 4-6-0 type locomotive from the Baldwin Locomotive Works.

THE MONTANA, WYOMING & SOUTHERN has ordered one consolidation locomotive from the Baldwin Locomotive Works.

THE EAST JERSEY RAILROAD TERMINAL has ordered one six-wheel switching locomotive from the Baldwin Locomotive Works.

THE NORFOLK SOUTHERN has ordered three consolidation type locomotives from the Baldwin Locomotive Works. Inquiry for this equipment was reported in the *Railway Age* of November 6.

THE MISSOURI PACIFIC is inquiring for 46 locomotives including 5 Mikado type and 5 eight-wheel switching locomotives for the International-Great Northern; 5 Pacific type and 6 eight-wheel switching locomotives for the Gulf Coast Lines and 5 Mikado type, 15 eight-wheel switching locomotives and 5 Mountain type locomotives for the Missouri Pacific. In the *Railway Age* of November 13 this company was reported as contemplating the purchase of about 45 locomotives.

### Freight Cars

THE FRUIT GROWERS EXPRESS is inquiring for 400 underframes.

THE NORTH AMERICAN CAR COMPANY has ordered 300 tank cars from the Bethlehem Steel Company.

THE JAMAICA GOVERNMENT RAILWAYS are inquiring through the car builders for from 25 to 30 box cars.

THE NORFOLK & WESTERN is inquiring for 2,000 all steel hopper coal cars. In the *Railway Age* of November 27 this company was reported as contemplating buying this equipment.

THE LEHIGH VALLEY is inquiring for 500 double sheathed box cars of 55 tons' capacity. This is in addition to its inquiry for 700 cars, reported in the *Railway Age* of November 27.

THE NORFOLK & WESTERN has definitely arranged for the building of 250 box cars and 25 steel caboose cars in its Roanoke shops. In the *Railway Age* of November 27 this company was reported as contemplating the building of this equipment in its Roanoke shops.

THE ROYAL STATE RAILWAYS OF SIAM will receive sealed tenders for the supply of wheels and axles, B. E. 2470, at Bangkok, Siam, until 14 o'clock, March 1, 1927. Tender forms and specifications may be obtained from C. P. Sandberg, 100 Broadway, New York, upon payment of \$4.00 a set.

THE MISSOURI PACIFIC is inquiring for 3,222 freight cars including 500 box cars of 40 tons' capacity, 100 self-clearing gondola cars of 50 tons' capacity for the International-Great Northern; 100 ballast cars and 20 caboose cars for the Gulf Coast Lines; 750 box cars of 50 tons' capacity, 750 automobile cars of 40 tons' capacity, 500 automobile furniture cars of 50 tons' capacity, 250 stock cars, 250 hopper bottom coal cars of 50 tons' capacity and 2 air dump cars, for the Missouri Pacific. In the *Railway Age* of October 9 it was reported that this company would enter the market for a number of freight cars.

### Passenger Cars

THE DEATH VALLEY RAILROAD has ordered one combination passenger and baggage gasoline rail motor car from the J. G. Brill Company.

THE CHICAGO & NORTH WESTERN has ordered three combination passenger and baggage cars from the American Car &

Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of November 13.

THE MISSOURI PACIFIC is inquiring for 70 cars for passenger service including 4 chair cars, 6 coaches, 2 baggage cars and 2 dining cars for the International-Great Northern; 6 chair cars, 4 baggage and 2 combination mail and baggage cars for the Gulf Coast Lines; 5 dining cars, 3 cafe club cars, 10 coaches, 10 baggage cars, 10 combination passenger and baggage cars and 6 combination mail and baggage cars for the Missouri Pacific.

THE UNION PACIFIC has ordered 8 observation cars and 10 dining cars from the Pullman Car & Manufacturing Corporation; 10 baggage cars from the Standard Steel Car Company; 5 combination horse, baggage and automobile cars from the Bethlehem Shipbuilding Corporation; 2 combination baggage and mail cars from the American Car & Foundry Company. In the *Railway Age* of November 13 this company was reported as inquiring for 35 cars of various types.

### Iron and Steel

THE ERIE is inquiring for 300 tons of steel for a bridge at Sharon, Pa.

THE PENNSYLVANIA is inquiring for 800 tons of steel for a bridge at Philadelphia.

THE CHICAGO, ROCK ISLAND & PACIFIC is inquiring for 600 tons of structural steel for bridge work.

THE CHICAGO, ST. PAUL, MINNEAPOLIS & OMAHA has ordered 15,000 tons of rails from the Bethlehem Steel Company.

THE INTERNATIONAL-GREAT NORTHERN has ordered 25,000 tons of rails from the Tennessee Coal, Iron & Railroad Company.

THE NORTHERN PACIFIC has ordered 215 tons of structural steel for use in Montana from the St. Paul Foundry Company.

THE UNION PACIFIC has ordered 800 tons of structural steel for a bridge at North Platte, Neb., from the McClintic-Marshall Company.

THE MINNEAPOLIS, NORTHFIELD & SOUTHERN has ordered 165 tons of structural steel from the Minneapolis Steel & Machinery Company.

THE CHICAGO & NORTH WESTERN has ordered 30,000 tons of rails from the Illinois Steel Company and 11,500 tons from the Inland Steel Company.

THE MISSOURI PACIFIC has ordered 5,500,000 tie plates from the Colorado Fuel & Iron Company, of which 1,500,000 are for the International-Great Northern.

THE BALTIMORE & OHIO has divided an order for 80,000 tons of rails among the Carnegie Steel Company, the Illinois Steel Company and the Inland Steel Company.

### Machinery and Tools

THE GRAND TRUNK has ordered a No. 4 car wheel lathe from the Niles-Bement-Pond Company.

THE GULF COAST LINES has ordered a 600-ton wheel press from Manning, Maxwell & Moore, Inc.

THE UNION RAILROAD has ordered an Elmes hydraulic press from Manning, Maxwell & Moore, Inc.

THE CENTRAL VERMONT has ordered a vertical drill press from the Niles-Bement-Pond Company.

THE GEORGIA RAILROAD has ordered a 36-in. by 44-in. side head mill from the Niles-Bement-Pond Company.

THE GREEN BAY & WESTERN has ordered a 300-ton wheel press from Manning, Maxwell & Moore, Inc.

THE LONG ISLAND has ordered a 25-ton, 70-ft. span traveling gantry crane from the Niles-Bement-Pond Company.



THE DELAWARE, LACKAWANNA & WESTERN has ordered a 32-in. heavy duty shaper from Manning, Maxwell & Moore, Inc.

THE CENTRAL OF NEW JERSEY has ordered a traveling grab bucket crane of 4-tons capacity from the Niles-Bement-Pond Company.

THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS has ordered a 300-500-ton double frame steam hammer from Manning, Maxwell & Moore, Inc.

THE PACIFIC FRUIT EXPRESS has ordered a Putnam double axle lathe, and a Putnam 48-in. heavy car wheel borer, from Manning, Maxwell & Moore, Inc.

THE ERIE has ordered a 90-in. Putnam driving wheel lathe and a 90-in. Putnam journal quartering and pin turning lathe, from Manning, Maxwell & Moore, Inc.

THE NEW YORK CENTRAL has ordered one 25-ton locomotive crane from the Browning Crane Company and a 16-ft. full pneumatic flanging clamp from the Niles-Bement-Pond Company.

THE ILLINOIS CENTRAL has ordered a Putnam heavy duty double end axle lathe, a National 2-in. high duty heading and forging machine, a sectional flanging press, a 300-600 ton combination car wheel press and a Bignall & Keeler pipe machine, from Manning, Maxwell & Moore, Inc.

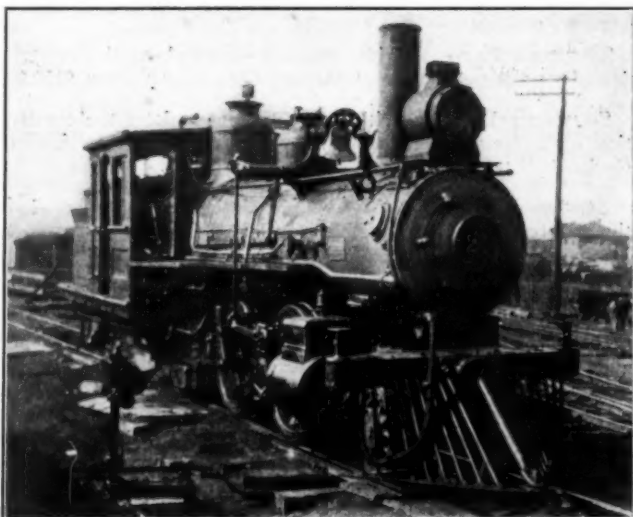
THE MISSOURI PACIFIC is inquiring for two 150-ton wrecking cranes, one for the Missouri Pacific and one for the International-Great Northern and the Gulf Coast Lines, two clam shell steam shovels, two rail unloaders and one caterpillar ditching machine. The Missouri Pacific has ordered a 90-in. Putnam journal quartering and pin turning lathe from Manning, Maxwell & Moore, Inc.

## Signaling

THE NEW YORK CENTRAL has ordered from the Union Switch & Signal Company, for an addition to a mechanical interlocking at Adrian, Mich., an electro-mechanical interlocking, style S-8.

THE PENNSYLVANIA has ordered from the Union Switch & Signal Company, electrical interlocking apparatus to be added to the mechanical interlockings at BU Tower, Indianapolis, Ind., and at Fort Wayne, Ind.

THE LOS ANGELES & SALT LAKE (Union Pacific) has ordered from the Union Switch & Signal Company, automatic signal material to be installed between Tomas, Utah and Milford; also between Las Vegas, Nev., and Farrier; 230 color light signals, 658 relays and other material.



On the Boston, Revere Beach & Lynn

## Supply Trade News

The Link-Belt Company, Chicago, has opened a sales and service branch at 152 Temple street, New Haven, Conn., in charge of R. H. Hagner, formerly of the company's Philadelphia office.

Joseph T. Ryerson & Son, Inc., Chicago, has purchased the warehouse division and property of the Bourne-Fuller Company, Cleveland, Ohio, and will add to the facilities and increase the size and range of stock carried.

A. T. Herr has been appointed sales representative of the American Locomotive Company at Denver, Colo., with office in the United States Bank building, and J. W. Harty has been appointed sales representative at Detroit, Mich., with office in the General Motors Corporation building.

The National Railway Signal Company, a new corporation, has purchased the United Electric Apparatus Company, Boston, Mass., manufacturers of the Ziegler line of relays and electric block signal appliances. This new corporation, of which F. F. Bostwick is president and C. C. Anthony consulting engineer, is owned by the same interests which control the National Safety Appliance Company and the National Train Control Company. Development and expansion are under the supervision and management of Ed C. Wilson, first vice-president of the new organization and eastern manager for the National Safety Appliance Company. A. A. Ziegler, general manager of the United Electric Apparatus Company, will remain with the successors. The factory and offices of the National Railway Signal Company are located at 1529-33 Columbus avenue, Boston, Mass.

## Obituary

John Rainey McGinley of Pittsburgh, Pa., a former associate of the late George Westinghouse, with whom he organized the Westinghouse Electric & Manufacturing Company, died on November 29 in New York City at the age of 75. Mr. McGinley served with the Philadelphia Company of Pittsburgh as vice-president and general manager for many years. He was a director of the Chicago Pneumatic Tool Company, director of the Duff Manufacturing Company, chairman of the board of the Pittsburgh Screw & Bolt Company and a director of Dwight P. Robinson & Co., Inc., and of the Gary Screw & Bolt Company.

William Larimer Jones, president of the Jones & Laughlin Steel Corporation, Pittsburgh, Pa., and one of the leading steel makers of the country, died at his home in Pittsburgh

on November 25. He was graduated from Princeton University in 1887 with the degree of bachelor of science and from that time devoted his life to the steel manufacturing industry. He began work in the mills at Pittsburgh as assistant to his father, Thomas M. Jones, general manager of the company, and upon the latter's death in 1889, succeeded him as general manager. In 1906 he was elected vice-president of the company and in 1922, upon the formation of the present Jones &



W. L. Jones

Laughlin Steel Corporation, was made its president, succeeding his cousin, B. F. Jones, Jr., who became chairman of the board of directors.

## Railway Construction

**CALIFORNIA, ARIZONA & SANTA FE.**—This company, a subsidiary of the Atchison, Topeka & Santa Fe, has applied to the Interstate Commerce Commission for a certificate authorizing the construction of an extension of 15 miles from Beardsley, in Maricopa county, Ariz.

**CANADIAN NATIONAL.**—Sir Henry Thornton, President of this company, has announced that work will begin this winter on the proposed addition to the Chateau Laurier, the C. N. R.'s hotel at Ottawa, Ont., the estimated cost of which is \$2,000,000.

**CHICAGO & NORTH WESTERN.**—Bids closed on December 1, for the construction of an ice-house of 1,500 tons capacity at South Pekin, Ill.

**CHICAGO, MILWAUKEE & ST. PAUL.**—A contract has been let for the construction of a machine shop, 50 ft. by 70 ft., at Mason City, Iowa, at a cost of about \$10,000.

**CHICAGO, ROCK ISLAND & PACIFIC.**—A survey is in progress for a line between Fritch, Tex., and Stinnett, 19 miles.

**CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.**—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the installation of automatic electric coal hoisting equipment for an existing coaling station at Greensburg, Ind.

**GREAT NORTHERN.**—Plans have been prepared for the remodeling of the station at Bellingham, Wash., at a cost of about \$35,000.

**GREAT NORTHERN.**—Company forces will replace a single track bridge over the Spokane river near Spokane, Wash., with a double track bridge at a cost of about \$84,000.

**GREAT NORTHERN.**—This company contemplates the construction of an extension from Richey, Mont., to Circle, 33 miles, as part of the originally planned New Rockford-Lewistown cut-off.

**GREAT NORTHERN.**—A contract has been let to Morrison & Knudsen, Boise, Idaho, for elimination of a curve and bridge in Scotia canyon between Camden, Wash., and Scotia by the driving of an 800-ft. tunnel. The project involves an expenditure of about \$240,000.

**GULF COAST LINES.**—The St. Louis, Brownsville & Mexico has been authorized by the Interstate Commerce Commission to construct an extension of its line from a point on its main line near Raymondville, Texas, in a general southeasterly direction to a point near the Hidalgo-Cameron County floodway, a distance of about 18 miles, all in Willacy county. The extension is intended to serve an agricultural area and to shorten the hauls of the railroad.

**INDIANAPOLIS UNION.**—This company contemplates the elevation of seven miles of the line of the Belt Railroad, Indianapolis, Ind., which it controls, at a total cost of about \$13,000,000. Included in the project, which will not be completed until 1935, are the relocation and rebuilding of a locomotive repair shop; the elimination of 23 street grade crossings and 4 railroad grade crossings; the construction of a five track bridge 800 ft. long over the White river; and the construction of a classification yard of 500-car capacity.

**KANSAS CITY SOUTHERN.**—This company has awarded a contract for the construction of a second track including reduction of grades to 0.5 per cent for a distance of 6.2 miles at Shreveport, La. Including separation of grades at street and railway crossings the expenditure involved is \$876,300.

**LOUISVILLE & NASHVILLE.**—This company has placed an order with the Roberts & Schaefer Company, Chicago, for the installation of sand-handling machinery at Paris, Ky.

**LOUISIANA & NORTH WEST.**—Contracts have been let for the construction of new shop buildings at Homer, La., involving a total expenditure of about \$10,000. The buildings include a

machine shop, 54 ft. by 88 ft., a coach shed, 28 ft. by 90 ft., a car shed 48 ft. by 120 ft., a blacksmith shop, 42 ft. by 48 ft., and a woodworking machine shop, 48 ft. by 60 ft.

**MERIDIAN & BIGBEE RIVER.**—A contract has been awarded to the J. A. Perdue & Co., Pine Bluff, Ark., for the construction of this railroad from Meridian, Miss., to Myrtlewood, Ala., a distance of 50 miles, at an estimated cost of \$1,250,000.

**MONTANA EASTERN.**—This company, a subsidiary of the Great Northern, has applied to the Interstate Commerce Commission for a certificate authorizing the construction of an extension from Richey to Circle, Mont., 33 miles, as part of an alternate main line.

**NEAME, CARSON & SOUTHERN.**—This company has applied to the Louisiana State Commission and to the Interstate Commerce Commission for permission to abandon its lines which extend from Neame, La., to Camp Baker, a distance of 22.1 miles, and from Carson Mill, La., to Carson, a distance of 0.56 miles.

**NEW ORLEANS & LOWER COAST.**—The Missouri Pacific, which has acquired control of this railroad, plans immediate rehabilitation of the 60 miles of line at a cost of about \$150,000.

**NORTHERN PACIFIC.**—A contract has been awarded to the Minnesota Western Construction Company, Minneapolis, Minn., for the construction of a reinforced concrete highway underpass at Coon Creek Junction, Minn., at a cost of about \$35,000.

**NORTHERN PACIFIC.**—This company has applied to the Interstate Commerce Commission for authority to build a new line from Glendive, Mont., to Brockway, 63 miles, to reach a large area of agricultural land and serve a large number of settlers. The company has also applied for authority to abandon that portion of its Bitter Root branch between Florence, Mont., and Hamilton, 25.77 miles, and to move the line to the east side of the Bitter Root river, where the new line will be 25.5 miles.

**PENNSYLVANIA.**—A contract has been let by this company to the Warren-Ehret Company, of Philadelphia, Pa., for the roofing for new shops at Shire Oaks, Pa. This company has also awarded a contract to the Keystone State Corporation, Philadelphia, Pa., for the construction of a new bridge over the main line of railroad at 59th street, Philadelphia, at an estimated cost of \$200,000.

**READING.**—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the construction of a "N. & W." type electric cinder plant at Trenton, N. J.

**READING.**—The Atlantic City railroad, subsidiary of the Reading System, is arranging to build a branch line for handling freight and passenger traffic from Cape May, N. J., to a terminal property which it has acquired at Cape May point, a distance of about three miles. The western terminus of the new line will provide a direct rail connection with the New Jersey terminus of the Lewes, Delaware, Cape May Ferry Company.

**SOUTHERN PACIFIC.**—This company contemplates the construction of a passenger station at Merced, Cal., to cost about \$150,000.

**SOUTHERN PACIFIC.**—This company contemplates the construction of a freight spur, 4.68 miles, with team tracks into the Orchard district near Marysville, Cal.

**ST. LOUIS-SAN FRANCISCO.**—Bids closed on December 1 for the construction of a coaling station at Chateau avenue, St. Louis, Mo.

**WESTERN PACIFIC.**—Tentative plans for the construction of a freight terminal and industrial warehouse along Islais Creek, San Francisco, Cal., at a cost of about \$2,000,000 have been approved by the board of directors of this company.

**THE RECEIPT AND ACCEPTANCE** of goods by the consignee under a bill of lading providing for payment of freight charges on delivery implies a promise on the part of the consignee to pay the freight; and no agreement between the consignor and the consignee of which the carrier had no knowledge would be binding on the carrier, nor would the carrier be bound to inform the consignee that the freight was not paid by the consignor.—*Transmarine Corp. v. D. & H.*, 216 N. Y. S. 623.



## Railway Financial News

**ALABAMA GREAT SOUTHERN.**—Common, \$1.75, semi-annually; common, \$.50, extra, both payable December 30 to holders of record December 10. Preferred, \$1.75, semi-annually; preferred, \$.50, extra, both payable February 14 to holders of record January 14.

**ALASKA ANTHRACITE.**—*Fined.*—The office of United States District Attorney Emory R. Buckner of New York announced on November 27 that this company and its general manager had pleaded guilty to an indictment obtained by the government charging the defendants with having sold its bonds at 77½ and 80 instead of at 90, a price fixed by the Interstate Commerce Commission. Each of the defendants was fined \$5,000. The indictment in question was handed down in October, 1925.

**ATLANTA, BIRMINGHAM & COAST.**—*New Company.*—This company which is the successor company of the Atlanta, Birmingham & Atlantic and which will be controlled by the Atlantic Coast Line was granted a new charter at Atlanta, Ga., on November 24.

**ATLANTIC COAST LINE.**—*New Stock Issue.*—This company has applied to the Interstate Commerce Commission for authority to issue \$13,756,500 of common stock, to be offered at par to the holders of preferred and common stock, at the rate of one share of new stock for each five shares of stock held, the proceeds to be used to provide funds for corporate purposes, including extensions to its lines and additions and betterments. The company's charter provides for a total of \$100,000,000 of stock and \$76,000,000 has been authorized, of which \$68,782,900 has been issued.

**CACHE VALLEY.**—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Sedgwick to Light, Ark., 9.5 miles.

**CHICAGO, ROCK ISLAND & PACIFIC.**—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue \$1,000,000 of general mortgage 4 per cent bonds and \$1,000,000 of first and refunding mortgage 4 per cent bonds, the former to be deposited with the trustee of the first and refunding mortgage in exchange for the latter, which are to be held in the treasury for use as collateral for short terms notes.

**COLORADO & SOUTHERN.**—*Dividend.*—Directors, meeting on December 1, declared a dividend of 3 per cent on the common stock, payable December 31 to stockholders of record on December 11. This company has been paying 4 per cent on its first and second preferred stock since 1917. It paid 2 per cent on its common stock from 1908 to 1911, 1 per cent in 1912 and 3 per cent in 1921 and 1922 but has paid no common dividends since.

**ERIE.**—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to pledge as collateral for short term notes \$219,000 of first consolidated mortgage 4 per cent bonds and \$5,282,900 of general mortgage 4 per cent convertible bonds.

**GEORGIA & FLORIDA.**—*Sold.*—This company was sold at public auction at Augusta, Ga., on November 22 for \$1,000,000 to a committee representing the first mortgage 5 per cent bondholders of the property in the interest of which the road is about to be re-organized.

**GLASGOW.**—*Stock Dividend.*—This company, which owns a line in Barren county, Ky., leased to the Louisville & Nashville, has applied to the Interstate Commerce Commission for authority to issue \$100,000 of additional common stock to be issued ratably to its common stockholders as a 50 per cent stock dividend.

**LEHIGH VALLEY.**—*Extra Dividend.*—Directors, on December 1, declared an extra dividend of \$1.50 or 3 per cent on the \$50 par value stock in addition to the regular quarterly dividend of 1¼ per cent. The dividends are payable January 3 to stockholders of record December 18.

**LOUISVILLE & NASHVILLE.**—*Assumption of Obligation.*—This company has been authorized by the Interstate Commerce Com-

mission to assume obligation and liability as lessee of the securities of the Cumberland & Manchester recently acquired by the Louisville & Nashville.

**NEW YORK CENTRAL.**—*Lease Hearing Postponed.*—The Interstate Commerce Commission has postponed from December 7 to January 11 the hearing before Director Mahaffie of its Bureau of Finance on the application of the Cleveland, Cincinnati, Chicago & St. Louis to lease the Cincinnati Northern and the Evansville, Indianapolis & Terre Haute and that of the New York Central to lease the Michigan Central, the Big Four and the Chicago, Kalamazoo & Saginaw.

**NEW YORK, NEW HAVEN & HARTFORD.**—*Equipment Trust Certificates.*—The Interstate Commerce Commission has authorized an issue of \$4,995,000 of equipment trust certificates to be sold at not less than 97.777.

The railroad company announced on December 1 that it had awarded to a group headed by the First National Corporation of Boston, and including Blodgett & Co., Rutter & Co., and Albert Hale & Co. of Boston, the issue of \$4,995,000 4½ per cent equipment trust certificates for which the road requested some of the leading investment houses to submit bids on November 26. Ten bids were submitted. It is understood that the road after receiving bids forwarded them to the Interstate Commerce Commission, which, after due consideration, announced the bid meeting with its approval.

**TOLEDO & OHIO CENTRAL.**—*Tentative Valuation.*—The Interstate Commerce Commission has issued a tentative valuation report placing the final value for rate-making purposes of the property owned and used for common carrier purposes as of 1918 at \$26,060,000. The outstanding capitalization as of valuation date was \$33,017,394 and its investment in road and equipment as stated in the books was \$29,005,885. With readjustments required by the accounting examination, the report says, this would be reduced to \$22,170,556.

**WICHITA FALLS, RANGER & FORT WORTH.**—*Securities.*—This company has applied to the Interstate Commerce Commission for authority to issue \$2,500,000 of 5½ per cent first mortgage bonds and \$1,500,000 of common stock, to pay for the construction of the line and to liquidate a judgment against the company on account of construction for \$3,084,916.

### Dividends Declared

Alabama Great Southern.—Common, \$1.75, semi-annually; common, \$.50 extra, both payable December 30 to holders of record December 10. Preferred, \$1.75, semi-annually; preferred, \$.50 extra, both payable February 14 to holders of record January 14.  
Bangor & Aroostook.—Common, \$0.75 quarterly; preferred, 1¼ per cent, quarterly, both payable January 1 to holders of record December 14.  
Buffalo & Susquehanna.—Preferred, 2 per cent, payable December 30 to holders of record December 15.  
Erie & Pittsburgh.—\$.87½, quarterly, payable December 10 to holders of record November 30.

### Average Price of Stocks and Bonds

	Nov. 30	Last Week	Last Year
Average price of 20 representative railway stocks .....	100.75	101.59	93.35
Average price of 20 representative railway bonds .....	96.83	96.91	93.09

### Valuation Reports

The Interstate Commerce Commission has issued final or tentative valuation reports stating the final value for rate-making purposes of the property owned and used for common carrier purposes, as of the respective valuation dates, as follows:

FINAL REPORTS		
Atlantic & Western .....	\$241,720	1917
Dansville & Mt. Morris .....	169,500	1918
Port Townsend & Puget Sound .....	3,790	1917
Rock Island-Frisco Terminal .....	2,140,250	1915
TENTATIVE REPORTS		
Carolina & Northwestern .....	\$2,937,000	1917
Great Southern .....	678,660	1916
Johnstown & Stony Creek .....	184,554	1917
Macon Terminal .....	1,332,086	1917
McKeesport Connecting .....	1,122,500	1917
Minneapolis, Northfield & Southern .....	1,620,000	1920
Nevada-California-Oregon .....	1,940,000	1917
North Charleston Terminal .....	112,500	1919
Zanesville Terminal .....	135,000	1918

## Railway Officers

### Executive

**Eugene Fox**, who has been elected vice-president of the Western Pacific in charge of traffic, with headquarters at San Francisco, Cal., was born in January, 1877, at Winterset, Iowa, and entered railway service in December, 1895, as a yard clerk on the Chicago, Rock Island & Pacific. Until August, 1898, he served consecutively as car clerk, ticket agent, telegraph operator and bill clerk and was then promoted to traveling freight agent, with headquarters at Salt Lake City, Utah. In 1900, he was transferred to St. Louis, Mo., and in October, 1902, he became traveling freight and passenger agent for the El Paso & Northeastern (now a subsidiary of the Southern Pacific) and the Chicago, Rock Island & Mexico (a subsidiary of the Chicago, Rock Island & Pacific) at El Paso, Tex., where he remained until June, 1905, when he was appointed general agent for the El Paso & Southwestern, with headquarters at Los Angeles, Cal. In 1907, he was transferred to Chicago and from June, 1909, to November, 1910, he was assistant general freight agent, with headquarters at El Paso. Mr. Fox was then promoted to general freight and passenger agent at the same place and in 1913 he was elected vice-president of the El Paso & Southwestern, with the same headquarters. Upon the leasing of this railroad by the Southern Pacific in November, 1925, he was appointed assistant traffic manager, a position he held until his election to vice-president of the Western Pacific.

**John E. Dalrymple**, vice-president in charge of traffic and express of the Canadian National, with headquarters at Montreal, Que., has resigned, effective December 31. Mr. Dalrymple was born on January 1, 1869, at Montreal, Que., and entered railway service on July 1, 1883, as a junior clerk in the treasurer's office of the Grand Trunk. From April, 1890, to February, 1896, he was secretary to the traffic manager of the Chicago & Grand Trunk (now a part of the Grand Trunk) at Chicago, and from the latter date until May, 1899, was secretary to the general traffic manager of the Grand Trunk System at Montreal. He was division freight agent for the same road at Hamilton, Ont., until August, 1899, and then became division freight agent and manager of the Grand Trunk Dispatch line at Detroit, Mich., which position he held until May, 1900. From May, 1900, until March, 1901,



Eugene Fox



J. E. Dalrymple

Mr. Dalrymple was general freight agent for the Central Vermont at St. Albans, Vt., and from the latter date until April, 1902, he was assistant to the second vice-president and general manager of the Grand Trunk System. From April, 1902, until August, 1905, he was again general freight agent for the Central Vermont, and then became general freight agent of the Grand Trunk, at Montreal, which position he held until May 1, 1908. Mr. Dalrymple was then appointed assistant freight traffic manager of the Grand Trunk Pacific at Winnipeg, and from June 1, 1910, until October 1, 1911, he also occupied the same position on the Grand Trunk Pacific Coast Steamship Company. He was vice-president of the Grand Trunk System, the Central Vermont, the Grand Trunk Pacific and the Grand Trunk Pacific Coast Steamship Company from October, 1911, until August, 1920. From the latter date until March, 1923, he was vice-president of the Grand Trunk, Central Vermont and affiliated lines. In March, 1923, Mr. Dalrymple became vice-president in charge of traffic of the Canadian National, which position he is holding at the present time.

**Albert T. Weldon**, general traffic manager of the Canadian National, with headquarters at Montreal, Que., has been appointed vice-president in charge of traffic and express, with the same headquarters, succeeding **J. E. Dalrymple**, who is resigning, effective December 31. Mr. Weldon's photograph and a biographical sketch of his railway career, appeared in the *Railway Age* of September 11, 1926, page 485. The position of general traffic manager will be abolished.

### Operating

**F. A. Baker**, yardmaster on the Atchison, Topeka & Santa Fe, with headquarters at Clovis, N. M., has been promoted to assistant trainmaster, with headquarters at Isom, Tex.

**Otto Parrhysius**, assistant chief special agent of the Northern Pacific, with headquarters at St. Paul, Minn., has been promoted to chief special agent, with the same headquarters, succeeding **W. J. McFetridge**, deceased.

**W. J. Whalen**, roadmaster on the Chicago, Milwaukee & Gary line of the Chicago, Milwaukee & St. Paul, with headquarters at Joliet, Ill., has been promoted to trainmaster, with headquarters at Montevideo, Minn.

**G. W. Murphy** has been appointed superintendent of the Bangor and Portland division of the Delaware, Lackawanna & Western, with headquarters at Bangor, Pa., succeeding **H. E. Griffith**, who has resigned on account of ill health.

**A. E. Marsh** has been appointed superintendent of terminals of the St. Johns River Terminal Company (Southern—Lines West), with headquarters at Jacksonville, Fla., succeeding **J. W. Whitaker**, who has been transferred in the same capacity on the Southern, with headquarters at Chattanooga, Tenn., reporting to the general superintendent, succeeding **A. J. May**, who has been assigned to other duties.

**C. L. Nichols**, general manager of the lines of the Northern Pacific east of Paradise, Mont., with headquarters at St. Paul, Minn., has retired under the pension rules of the company and has been succeeded by **T. H. Lantry**, general superintendent, with headquarters at Livingston, Mont. **Thomas F. Lowry**, superintendent of the St. Paul division, with headquarters at Minneapolis, Minn., has been promoted to succeed Mr. Lantry. Mr. Lowry will be succeeded by **G. H. Jacobus**, division superintendent, with headquarters at Livingston, Mont.

### Traffic

**J. J. Duffy** has been appointed general agent on the San Francisco-Sacramento, with headquarters at Kansas City, Mo.

**J. E. Terry** has been appointed assistant general freight agent on the Illinois Terminal, with headquarters at Alton, Ill.

**R. S. Boston**, freight representative of the Alton & Southern, with headquarters at St. Louis, Mo., has been appointed



general agent, with headquarters at Chicago, a newly created position.

**C. W. Wells**, assistant manager rate and tariff bureau of the Canadian National, with headquarters at Montreal, Que., has been appointed chief of tariff bureau, with the same headquarters. He will have jurisdiction over lines Armstrong, Fort William, Ont., Port Huron, Mich., and east.

**Ernest C. Ash**, who has been promoted to general freight agent of the Alabama, Tennessee & Northern, with headquarters at Mobile, Ala., was born on May 31, 1896, at Mobile, Ala., and was graduated from Barton Academy (High School) in 1913. He entered railway service in July, 1913, in the accounting department of the New Orleans, Mobile & Chicago (now a part of the Gulf, Mobile & Northern), and on December 1, 1917, he became rate clerk in the traffic department of the Gulf, Mobile & Northern. Mr. Ash became chief clerk to the assistant general freight agent of the Mobile & Ohio, on April 12, 1920, and in October of the same year, chief clerk to the traffic manager of the Alabama, Tennessee & Northern. On November 18, 1924, he was appointed assistant general freight agent of the same road, which position he was holding at the time of his recent promotion to general freight agent.

**Lucius W. Wakeley**, assistant to the passenger traffic manager of the Chicago, Burlington & Quincy and for 26 years previous to 1922 general passenger agent, has been retired at his own request, as a general passenger agent. Mr. Wakeley was born on October 30, 1858, in Nebraska, and attended the United States Military Academy, West Point, N. Y. He entered railway service in November, 1881, as a clerk on the Burlington, serving from 1883 to 1885 as chief rate clerk in the freight department. At the end of this time he was appointed chief clerk in the freight department and in 1886 he was appointed local freight agent at Chicago. During 1887 he was assistant to the general manager and was then promoted to assistant general passenger and ticket agent. On January 1, 1896, he was again promoted to general passenger agent of the Hannibal & St. Joseph, the St. Louis, Keokuk & Northwestern and the Kansas City, St. Joseph & Council Bluffs (the Missouri lines of the Burlington) and the Chicago, Burlington & Kansas City, with headquarters at St. Louis, Mo. On June 1, 1904, Mr. Wakeley was transferred to the lines west of the Missouri river, with headquarters at Omaha, Neb., and on January 1, 1923, he was appointed assistant to the passenger traffic manager at Chicago, a position he held until his retirement on December 1, as general passenger agent.

**Richard W. Long**, who has been appointed assistant freight traffic manager of the Central region of the Canadian National, with headquarters at Toronto, Ont., was born on March 20,



R. W. Long

1873, at Appin, Ont., and was educated in the common school. He entered railway service on March 14, 1889, with the Grand Trunk at Buffalo, N. Y., and from that date until April 16, 1897, was subsequently telegraph operator, stenographer and clerk in various offices of the Grand Trunk at Buffalo, N. Y. On the latter date he was appointed contracting freight agent for the same road at the same place. On September 16, 1901, he was appointed commercial agent, with the same

headquarters, and on July 1, 1904, was appointed division freight agent at Stratford, Ont. On July 22, 1907, Mr. Long became division freight agent at Hamilton, Ont., and on June 1, 1919, was transferred in the same capacity to Toronto,

Ont. On March 10, 1923, he was appointed general freight agent of the Central region of the Canadian National Grand Trunk System (lines in United States) at Montreal, Que., which position he was holding at the time of his recent appointment as assistant freight traffic manager.

**Charles B. Sexton**, who has been promoted to assistant freight traffic manager on the Northern Pacific, with headquarters at St. Paul, Minn., was born on September 5, 1865,



Charles B. Sexton

at Clarksville, Mo., and received his college education at the University of Missouri, Columbia, Mo. He began his railway service in 1884, with the Chicago, Burlington & Quincy at East St. Louis, Mo., later entering the employ of the Northern Pacific at St. Louis, Mo. On September 1, 1889, he was promoted to commercial agent, being appointed general agent, with headquarters at Chicago on August 1, 1905. Mr. Sexton remained at this point until May 1, 1918, when he was promoted to assistant general freight agent at St. Paul, and on March 1, 1920, he became general agent at Chicago. From Chicago he was transferred to New York during the same year, with the title of general agent, a position he held until his promotion to assistant freight traffic manager.

#### Purchases and Stores

**R. L. Tindal** has been appointed purchasing agent of the Nickel Plate district and the Lake Erie & Western district of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio, succeeding **W. P. Dittoe**, who has retired after having been purchasing agent for the past 27 years and continuously in the service of the company for 45 years.

**Eugene A. Clifford**, who has been appointed general purchasing agent of the Chicago & North Western and the Chicago, St. Paul, Minneapolis & Omaha, with headquarters



Eugene A. Clifford

at Chicago, was born on August 12, 1878, in Ireland. He received his education in the Chicago schools, and at St. Ignatius College, Chicago, entering railway service on April 10, 1901, with the Atchison, Topeka & Santa Fe. He served in various capacities on the Santa Fe until November, 1910, when he was promoted to chief clerk in the purchasing department. Three years later he was again promoted to assistant general purchasing agent, a position he held at the time of his resignation to become general purchasing agent of the North Western. During the life of the United States Railroad Administration Mr. Clifford served as a member of the purchasing committee of the Central Western region and during the coal and railroad strike of 1922, he represented the Western roads at Washington, D. C., in the distribution of coal in co-operation with the President's coal committee.

### Engineering, Maintenance of Way and Signaling

**Thomas C. Macnabb**, who has been promoted to engineer of construction of the Western lines of the Canadian Pacific, with headquarters at Winnipeg, Man., was born on August

22, 1876, at Toronto, Ont., and graduated from the University of Manitoba, Winnipeg. He entered railway service in June, 1900, in the traffic department of the Canadian Pacific at Brandon, Man., as a freight clerk and in 1902 he went with the engineering department on preliminary and location surveys. In 1904 Mr. Macnabb was promoted to resident engineer on construction and in 1907 he became an engineer on location, being appointed assistant engineer in charge of construction, with headquarters at Welburn, Sask., in 1909. During

1915 he served as resident engineer of maintenance of way, with headquarters at Regina, Sask., and in the next year he was promoted to engineer in charge of maintenance for the Saskatchewan district, with headquarters at Moose Jaw, Sask. Transferred to the operating department in 1917, Mr. Macnabb acted as superintendent in the Mountain territory, Revelstoke division, with headquarters at Revelstoke, B. C., until his appointment as engineer of construction of the Western lines.



T. C. Macnabb

### Obituary

**Eugene Gatewood**, executive general passenger agent of the Southern, died on November 30, from injuries received recently when he was kicked by a horse. Mr. Gatewood was 49 years of age.

**Charles F. Morse**, former president of the Kansas City stockyards, died at his home in Boston on December 1, at the age of 87. Mr. Morse served as an officer in the Civil War, and after that was connected with several railroads in the west, among them being the Burlington & Missouri River, the Atchison, Topeka & Santa Fe., and the Kansas City Stockyards. At the time of his retirement in 1913, Mr. Morse was president of the latter company.

**T. P. Cullen**, who retired as division superintendent on the Los Angeles & Salt Lake in June, 1922, died on November 20, at his home in Los Angeles, Cal. Mr. Cullen, who was born at Highland, Wis., in 1864, entered railway service before the age of 17. In 1882 he became a construction engineer on the Northern Pacific, with headquarters at Glendive, Mont., and in 1887 was appointed general yardmaster. He was appointed superintendent on the San Pedro, Los Angeles & Salt Lake (now the Los Angeles & Salt Lake), with headquarters at Los Angeles in 1902, a position he held until his retirement in 1922. Mr. Cullen was for 12 years a senator in the Montana state legislature.

**Oliver W. Mink**, at one time vice-president of the Union Pacific, died on November 27, at the age of 76. Mr. Mink was born at Albany, N. Y., and entered railway service in 1865, and for a year was telegraph operator for the New York Central. From 1866 to 1872, he was a clerk in the treasurer's office of that company and of the New York Central & Hudson River (now a part of the New York Central) and from the latter date until 1877, was bookkeeper in the treasurer's office of the Union Pacific. He then became assistant secretary and assistant treasurer of the same road, which position he held until 1885, when he became

comptroller. From 1892 to 1895, he was second vice-president of the same road. In October, 1893, Mr. Mink became one of the receivers of the Union Pacific System, and continued as a receiver until it was reorganized in 1897. He became a director of the Oregon Short Line, which office he gave up three years ago on account of ill health. He was also at one time comptroller of that railroad.

**Howard Montreville Curry**, who retired as general mechanical superintendent of the Northern Pacific in July, 1923, died on November 24, at his home in St. Paul, Minn. Mr. Curry was born on January 6, 1861, in Ogle county, Ill., and received his public school education at Freeport, Ill. He entered railway service on April 8, 1880, as a shopman on the Northern Pacific, later serving as a locomotive fireman and being promoted to locomotive engineer in July, 1882. On December 1, 1891, he was again promoted to assistant road foreman of engines on the lines east of the Missouri river and the next year he acted as locomotive engineer as well as assistant road foreman of engines. He became road foreman of engines on December 1, 1898, and three years later he was appointed division master mechanic at Fargo, N. D., where he remained until December 1, 1902, when he was transferred to Staples, Minn. In February, 1905, he was promoted to general master mechanic of the lines east of Billings, Mont., being transferred to the lines east of Paradise, Mont., on January 1, 1908, and to the lines east of the Missouri river in January, 1910. Mr. Curry was promoted to mechanical superintendent on May 1, 1911, and to general mechanical superintendent on August 14, 1920. He retired in July, 1923, after completing 43 continuous years in the service of the Northern Pacific.

**Will Albert Terry**, freight traffic manager of the New York Central, with headquarters at Chicago, died on November 25, at his home in Evanston, Ill., following an attack of intestinal influenza.

He was born on March 20, 1864, in Huron county, Ohio, and began railroad work in 1879 as a telegraph operator on the Canada Southern (now a part of the Michigan Central). The following year he was employed in the train dispatcher's office of the Ft. Wayne & Jackson (now a part of the New York Central) at Jackson, Mich., and in January, 1883, he entered the freight department of the Wheeling & Lake Erie at Marietta, Ohio. In September, 1884, he

was transferred to the office of the train dispatcher at Cambridge, Ohio, and from July, 1885, to February, 1886, he served as ticket agent at Marietta. Mr. Terry was then out of railway service until September, 1890, when he entered the master car builder's office of the Pittsburgh & Western (now a subsidiary of the Baltimore & Ohio). He remained here until January, 1891, when he was appointed commercial agent on the Wheeling & Lake Erie, with headquarters at Pittsburgh, Pa., and in May, 1895, he was appointed to a similar position on the Cincinnati, Hamilton & Dayton and the Cleveland, Lorain & Wheeling (now subsidiaries of the Baltimore & Ohio) at the same place. From September, 1897, to January, 1903, he served as assistant general freight agent on the Pittsburgh & Lake Erie and he was then promoted to general freight agent. On January 1, 1910, Mr. Terry was again promoted to assistant freight traffic manager of the New York Central, lines west of Buffalo, with headquarters at Chicago. On January 1, 1920, he was promoted to freight traffic manager, with the same headquarters, a position he held until his death.



W. A. Terry